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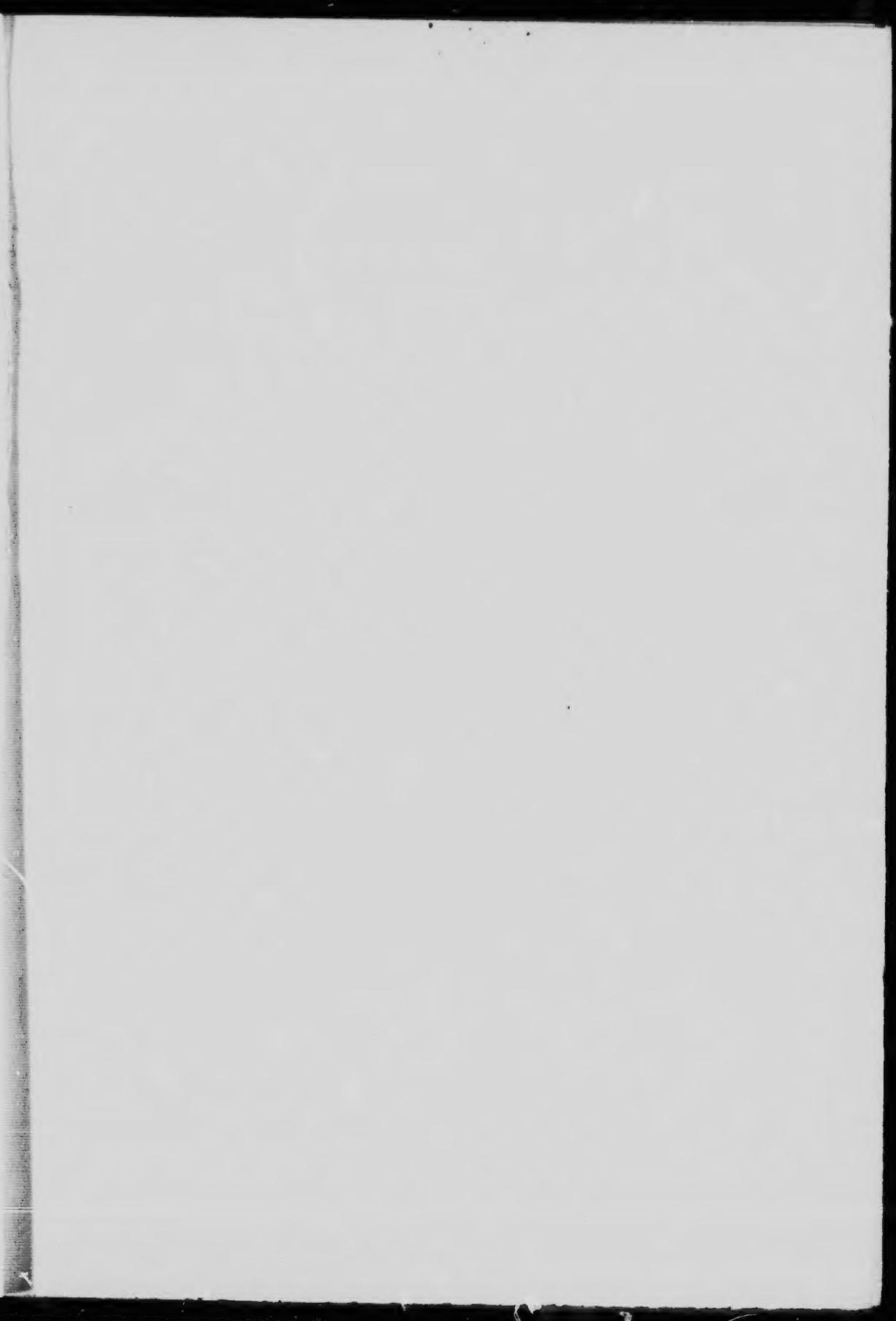


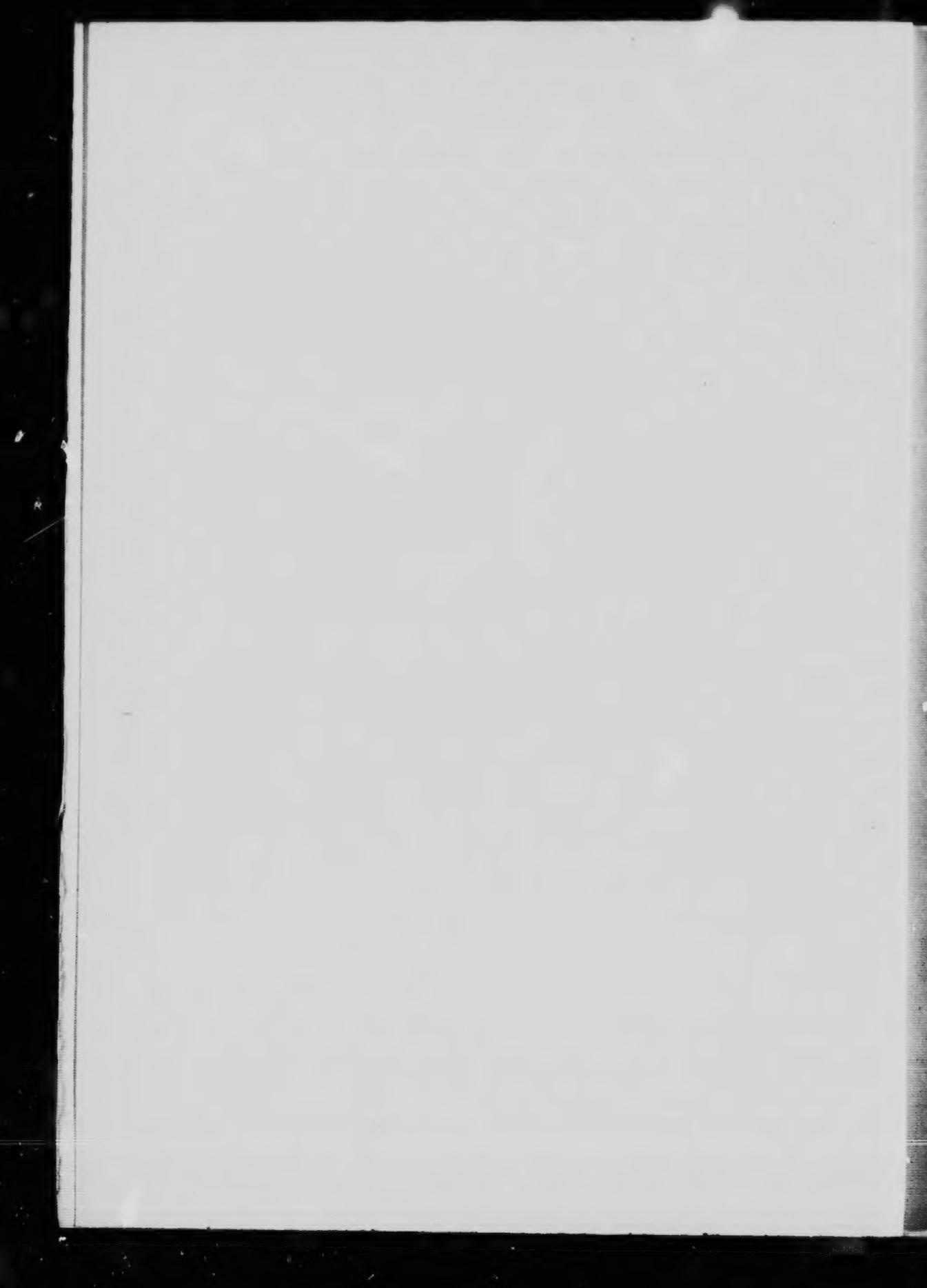
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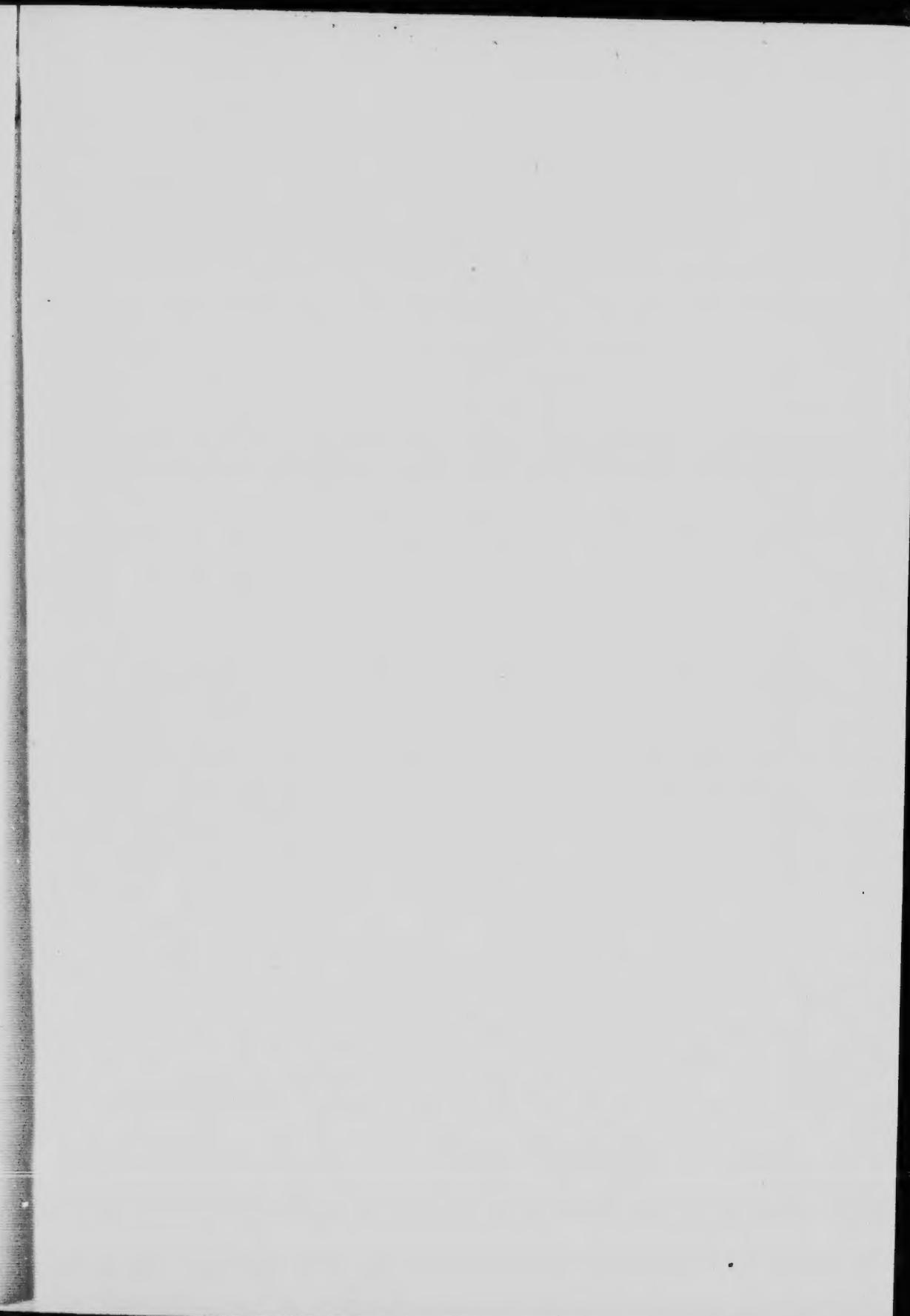






BIRDS OF LA PLATA

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SPUR-WINGED LAPWING

Vanellus cayennensis (Gm.)

BIRDS OF LA PLATA

BY
W. H. HUDSON



*WITH TWENTY-TWO COLOURED
ILLUSTRATIONS BY
H. GRONVOLD*

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GLITTERING HUMMING-BIRD

Chlorostilbon splendidus

Head, upper parts, and wing-coverts golden bronze, inclining to green on upper tail-coverts; wings purplish brown; tail black glossed with green; throat and breast glittering emerald-green; beak bright red; length 3.5 inches. Female bronze-green above and grey beneath.

THIS *Trochilidae*, or Humming-birds, a distinctly South American form, are one of the most numerous families of birds on the globe, numbering over 400 known species, and ranging over the entire continent down to Tierra del Fuego. How surprising then to find that of this multitude of species no more than about a dozen are found in the entire Argentine country! It only adds to the surprise when it is found that humming-birds of these few species are common enough throughout the country. Even on the almost treeless grassy pampas of Buenos Ayres which are unsuited to the habits of this feathered forest sprite, one species at all events is found everywhere. Personally I was acquainted with only three species, and I recall that when living on the open pampas, every season when the white acacia at my home was in flower we had an invasion of Humming-birds. The plantation was divided by

BIRDS OF LA PLATA

avenues of large acacia trees, about a thousand in all, and as long as the blossoms lasted the little glittering birds were to be seen all over the place, in almost every tree, revelling in the fragrant sweetness ; but no sooner were the flowers faded than they were gone, and thereafter two or three pairs only remained to breed and spend the summer months in the plantation. All these birds were of one species —the Glittering Humming-bird, but on going a few miles from home to the marsh and forest on the low shores of the Plata river I would find the other two species. I spent a summer, bird-watching, in a herdsman's hut in the marshy forest and used to go out at sunset to a small open space overgrown with viper's-bugloss in flower. There is no flower the Humming-bird likes so well, and he is most busy feeding just before dark. Here, standing among the flowers, I would watch the shining little birds coming and going, each bird spending a minute or two sucking honey, then vanishing back into the shadowy trees, and from fifty to a hundred of them would always be in sight all around me at a time. Here all three species were feeding together ; but I was familiar with the habits of only one, the bird I describe here.

The Glittering Humming-bird appears in the vicinity of Buenos Ayres in September, and later in the spring is found everywhere on the pampas where there are plantations, but it is never seen on the treeless plains. Its sudden appearance in con-

GLITTERING HUMMING-BIRD 3

siderable numbers in plantations on the pampas, where there are flowers to which it is partial, like those of the acacia tree, and its just as sudden departure when the flowers have fallen, have led me to conclude that its migration extends much further south, probably into mid-Patagonia. Like most Humming-birds it is an exquisitely beautiful little creature, in its glittering green mantle; and in its aerial life and swift motions a miracle of energy. To those who have seen the Humming-bird in a state of nature all descriptions of its appearance and movements must seem idle. In the life-habits of the *Trochilidae* there is a singular monotony; and the Glittering Humming-bird differs little in its customs from other species that have been described. It is extremely pugnacious; the males meet to fight in the air, and rapidly ascend, revolving round each other, until when at a considerable height they suddenly separate and dart off in opposite directions. Occasionally two or three are seen flashing by, pursuing each other, with such velocity that even the Swift's flight, which is said to cover four hundred miles an hour, seems slow in comparison. This species also possesses the habit of darting towards a person and hovering bee-like for some time close to his face. It also flies frequently into a house, at window or door, but does not, like birds of other kinds, become confused on such occasions, and is much too lively to allow its retreat to be cut off. It feeds a great deal on minute spiders, and is fond of exploring the surfaces of mud and

brick walls, where it is seen deftly inserting its slender crimson bill into the small spider-holes in search of prey. The nest, like that of most hummingbirds, is a small, beautifully-made structure, composed of a variety of materials held closely together with spiders' webs, and is placed on a branch, or in a fork, or else suspended from slender drooping vines or twigs. Sometimes the nest is suspended to the thatch overhanging the eaves of a cottage, for except where persecuted the bird is quite fearless of man's presence. The eggs are two, and white.

Besides the little creaking chirp uttered at short intervals while flying or hovering, this species has a set song, composed of five or six tenuous and squeaking notes, uttered in rapid succession when the bird is perched. It is a song like that of the European Goldcrest in shape, and resembles it in sound, but is less musical, or more squeaky.

NACUNDA GOATSUCKER

Podager nacunda

Above brown with black vermiculations and blotches; wings black with a broad white bar across the base of the primaries; four outer tail-feathers broadly tipped with white; breast brown variegated with black; chin fulvous; band across throat and belly white; length 11, wing 9.5 inches. Female similar but without white on tail.

THE specific name of this Goatsucker is from the Guarani word *Nacundá*, which Azara tells us is the Indian nickname for any person with a very large

mouth. In the Argentine country it has several names, being called *Dormilón* (Sleepy-head) or *Duerme-duerme* (Sleep-sleep), also *Gallina ciega* (Blind Hen). It is a large, handsome bird, and differs from its congeners in being gregarious, and in never perching on trees or entering woods. It is an inhabitant of the open pampas. In Buenos Ayres, and also in Paraguay, according to Azara, it is a summer visitor, arriving at the end of September and leaving at the end of February. In the love season the male is sometimes heard uttering a song or call, with notes of a hollow mysterious character; at other times they are absolutely silent, except when disturbed in the daytime, and then each bird when taking flight emits the syllable *kuf* in a hollow voice. When flushed the bird rushes away with a wild zigzag flight, close to the ground, then suddenly drops like a stone, disappearing at the same time from sight as effectively as if the earth had swallowed it up, so perfect is the protective resemblance in the colouring of the upper plumage to the ground. In the evening they begin to fly about earlier than most *Caprimulgidae*, hawking after insects like swallows, skimming over the surface of the ground and water with a swift irregular flight; possibly the habit of sitting in open places exposed to the full glare of the sun has made them somewhat less nocturnal than other species that seek the shelter of thick woods or herbage during the hours of light.

The Nacunda breeds in October, and makes no nest, but lays two eggs on a scraped place on the

open plain. Mr. Dalgleish says of the eggs: "They are oval-shaped, and resemble much in appearance those of the Nightjar, except that the markings, which are similar in character to those of the latter, are of a reddish-brown or port-wine colour."

After the breeding-season they are sometimes found in flocks of forty or fifty individuals, and will spend months on the same spot, returning to it in equal numbers every year. One summer a flock of about two hundred individuals frequented a meadow near my house, and one day I observed them rise up very early in the evening and begin soaring about like a troop of swallows preparing to migrate. I watched them for upwards of an hour; but they did not scatter as on previous evenings to seek for food, and after a while they began to rise higher and higher, still keeping close together, until they disappeared from sight. Next morning I found that they had gone.

In Entrerios, Mr. Barrows tells us, this Goat-sucker is an abundant summer resident, arriving early in September and departing again in April. It is strictly crepuscular or nocturnal, never voluntarily taking wing by daylight. In November it lays a pair of spotted eggs in a hollow scooped in the soil of the open plain. These in shape and markings resemble eggs of the Night-hawk (*Chordeiles virginianus*), somewhat, but are of course much larger, and have a distinct reddish tinge. "We found the birds not uncommon near Bahia Blanca, 17th February, 1881,

RED-CRESTED WOODPECKER 7

but elsewhere on the Pampas we did not observe them."

There are altogether close on fifty species of Goatsuckers in South America; of these, six are found in Argentina. I only knew two; the one here described and the small species *Antrostomus parvulus*, which is rare in Buenos Ayres.

RED-CRESTED WOODPECKER

Chrysocolaptes cristatus

Above black barred with white; rump white with black spots; top of head black, nape scarlet; sides of head white, bordered with black; beneath white, yellowish on the neck, covered with round black spots; throat white striped with black; tail black, lateral rectrices slightly barred with yellow; length 10.5 inches. Female similar.

SOUTH and Central America has not fewer than 120 species of Woodpeckers; in Argentina there are only thirteen species known, and most of these are confined to the northern and forest districts. Five species range as far south as Buenos Ayres; of these I was acquainted with the following four.

The Red-crested Woodpecker ranges as far south as the vicinity of Buenos Ayres, and is not uncommon there in the few localities which possess wild forests. It is the handsomest of our Woodpeckers, having brighter tints than its congener of the plains, *Colaptes*

agricola. Like that bird, though not to the same extent, it has diverged from the typical *Picidae* in its habits, alighting sometimes on the ground to feed, and also frequently perching crosswise on branches of trees. It has a powerful, clear, abrupt, and oft-repeated note, and a rapid undulating flight.

The following interesting account of its breeding habits appears in a paper by Mr. Gibson : " The excavation for the nest is begun as early as September ; but the eggs are only laid during the first half of October. The hole is generally commenced where some branch has decayed away ; but care is taken that the remainder of the tree is sound. It opens at a height of from six to nine feet from the ground, and is excavated to a depth of nearly a foot. Occasionally it is sufficiently wide to admit of one's hand, but such is not always the case. No preparation is made for the eggs beyond the usual lining of some chips of wood.

" The pair which frequented the garden excavated a hole in a paradise-tree, and bred there for two consecutive years. The tree stood near one of the walks, and on any one passing the sitting bird immediately showed its head at the aperture, like a jack-in-the-box, and then flew away. Last year this pair actually bred in one of the posts of the horse-corral, notwithstanding the noise and bustle incident to such a locality. While waiting there, at sunrise, for the herd of horses to be shut in I used often to knock at the post, in order to make the Woodpecker leave its

RED-CRESTED WOODPECKER 9

nest, but the bird seemed indifferent to such a mild attack, and would even sit still while a hundred horses and mares rushed about the corral or hurled themselves against the sides of it. In another case I had worked with hammer and chisel for half-an-hour, cutting a hole on a level with the bottom of a nest, when the female first demonstrated her presence by flying out almost into my face. This last nest contained four (considerably incubated) eggs, which I took. Happening to pass the spot a fortnight after, I inspected the hole and was surprised to find that it had been deepened and another five eggs laid, while the entrance I had cut was the one now used by the birds. The nest was again resorted to the following year and a brood hatched out, but since then a pair of Wrens have occupied the place to the exclusion of the rightful owners."

The eggs are white, four or five in number, pear-shaped, and with polished shells.

White obtained specimens of this Woodpecker in Catamarca, and Mr. Barrows found it resident in Entrerios. The latter tells us it is "abundant in the woods everywhere, and conspicuous for its activity, bright colours, and large size."

PAMPAS WOODPECKER

Colaptes agricola

Above greyish white, transversely barred with black; wings black with golden-yellow shafts, and white bars on the outer webs; rump white with small black cross-bars; crested head black; sides of head and neck in front yellow; malar stripe red; length 13 inches. Female similar, but without the red malar stripe.

THE species commonly called *Carpintero* in the Argentine country, and ranging south to Patagonia, is one of a group of the *Picidae* of South America which diverge considerably in habits from the typical Woodpeckers. On trees they usually perch horizontally and crosswise, like ordinary birds, and only occasionally cling vertically to trunks of trees, using the tail as a support. They also seek their food more on the ground than on trees, in some cases not at all on trees, and they also breed oftener in holes in banks or cliffs than in the trunks of trees. As Darwin remarks in *The Origin of Species*, in his chapter on *Instinct*, these birds have, to some slight extent, been modified structurally in accordance with their less arboreal habits, the beak being weaker, the rectrices less stiff, and the legs longer than in other Woodpeckers. In South Brazil and Bolivia the *Colaptes campestris* represents this group, in Chili *C. pitius*, and in the Argentine country *C. agricola*.

Azara's description, under the heading *El Campestre*, probably refers to the Brazilian species, but agrees so well in every particular with the Pampas



PAMPAS WOODPECKER
Colaptes auricola, Mdlh.

PAMPAS WOODPECKER

11

Woodpecker that I cannot do better than quote it in full.

" Though this name (*Campestre*) seems inappropriate for any Woodpecker, no other better describes the present species, since it never enters forests, nor climbs on trunks to seek for insects under the bark, but finds its aliment on the open plain, running with ease on the ground, for its legs are longer than in the others. There it forcibly strikes its beak into the matted turf, where worms or insects lie concealed, and when the ant-hills are moist it breaks into them to feed on the ants or their larvæ. It also perches on trees, large or small, on the trunks or branches, whether horizontal or upright, sometimes in a clinging position, and sometimes crosswise in the manner common to birds. Its voice is powerful, and its cry uttered frequently both when flying and perching. It goes with its mate or family, and is the most common species in all these countries. It lays two to four eggs, with white, highly polished shells, and breeds in holes which it excavates in old walls of mud or of unbaked brick, also in the banks of streams ; and the eggs are laid on the bare floor without any lining."

In Patagonia, where I have found this bird breeding in the cliffs of the Rio Negro, its habits are precisely as Azara says ; but on the pampas of Buenos Ayres, where the conditions are different, there being no cliffs or old mud-walls suitable for breeding-places, the bird resorts to the big solitary *ombú* tree (*Pircunia dioica*), which has a very soft wood, and excavates

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a hole seven to nine inches deep, inclining upwards near the end, and terminating in a round chamber.

This reversal to an ancestral habit, which (considering the modified structure of the bird) must have been lost at a very remote period in its history, is exceedingly curious. Formerly this Woodpecker was quite common on the pampas. I remember that when I was a small boy quite a colony lived in the *ombú* trees growing about my home; now it is nearly extinct, and one may spend years on the plains without meeting with a single example.

Mr. Barrows speaks as follows of this species: "Abundant and breeding at all points visited. At Concepcion, where it is resident, it is by far the commonest Woodpecker. The ordinary note very much resembles the reiterated alarm-note of the Greater Yellow-legs (*Totanus melanoleucus*), but so loud as to be almost painful when close at hand, and easily heard a mile or more away. They spend much time on the ground, and I often found the bills of those shot quite muddy. A nest found near Concepcion, 6th November, 1880, was in the hollow trunk of a tree, the entrance being through an enlarged crack at a height of some three feet from the ground. The five white eggs were laid on the rubbish at the bottom of the cavity, perhaps a foot above the ground. In the treeless region about the Sierra de la Ventana we saw this bird about holes on the banks of the streams, where it doubtless had nests."

RINGED KINGFISHER

Ceryle torquata

Above greyish blue with narrow black shaft-stripes and small round white spots; wings black with a portion of the inner webs towards the base white, tail black barred with white; beneath chestnut-red; throat and belly white; length 15 inches. Female similar but with broad blue pectoral band.

THIS beautiful bird, the largest of the American Kingfishers, is found throughout the greater portion of South and Central America. In Argentina it is not common but is widely distributed and is known both in Buenos Ayres and Patagonia. In southern Patagonia it varies in colour and is of a slatey grey-blue on the upper parts, thickly sprinkled like a guinea-fowl with minute round white spots, hence the specific name *stellata*, bestowed on it by some ornithologists who regard it as a separate species.

Notwithstanding its wide distribution and great beauty, little has been recorded of the habits of this species. In Amazonia, Bartlett says, "it breeds in company with *Ceryle amazona*. The nest, however, is placed very much deeper in the bank than in the case of the last-named bird, the hole being from four to six feet in depth, with a chamber at the end sufficiently large for the young birds when nearly full-grown."

Two other species of Kingfishers range as far south as the Buenos Ayres pampas. The first, a third less in size than the Ringed Kingfisher, is the

Amazonian Kingfisher, *Ceryle amazona*, its colour above dark green, beneath white with a broad chestnut pectoral band. In Buenos Ayres this bird was fairly common and was usually seen in pairs. Its cry is exceedingly loud, hard, and abrupt, and so rapidly reiterated as to give it a sound resembling that of a policeman's rattle. But this is not its only language, and I was greatly surprised one day at hearing one warbling long clear notes, somewhat flute-like in quality, as it flew from tree to tree along the borders of a stream. It seems very strange that there should be a melodious Kingfisher; but Mr. Barrows also heard the allied *Ceryle americana* sing, much to his surprise. My belief is that the birds of this group possess a singing faculty but very rarely exercise it; with *C. americana* I am well acquainted, yet I never heard it utter any note except its hard rattling cry, resembling that of *C. amazona*, but less powerful.

This Kingfisher was found by White at Cosquin, where it is usually met with along the *acequias*, or canals made for the purpose of irrigating the cultivated lands. These canals are in places bordered with brushwood and trees, and are tolerably deep, with a swiftly flowing current, and abound in small fishes, so that this bird seems to prefer them as hunting-grounds to the rocky river-bed.

In Entrerios Mr. Barrows tells us this Kingfisher is not uncommon along the Lower Uruguay, and sometimes ascends the smaller streams a short distance. It is much more easily approached than *C. torquata*.

GUIRA CUCKOO

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The other species, the smallest of its family in South America, the Little Kingfisher, *Ceryle americana*, is about the size of the European Kingfisher, and resembles the last one described in its colouring. In its habits and language it also resembles the *C. amazona*.

It should be noted that the Kingfishers are poorly represented in South America, there being but eight species known in the entire continent, and these all of the one genus *Ceryle*. In the Old World there are 120 species known, and many genera.

GUIRA CUCKOO

Guira piririgua

Above dark brown with white shaft-stripes; head brown; wings reddish brown; rump white; tail white, crossed by a broad black band, the two central feathers uniform brown; beneath dull white; throat and breast with long linear black shaft-stripes; bill and feet yellow; length 13 inches. Female similar.

PIRIRIGUA, the specific term adopted by naturalists for this bird, is, according to Azara, the vernacular name of the species in Paraguay. He says in that country it is abundant, but scarce in the Plata district. No doubt it has greatly increased and extended its range southwards during the hundred years which have elapsed since his time, as it is now very common in Buenos Ayres, where its vernacular name is *Urraca* (Magpie). In the last-named country

it is not yet quite in harmony with its environment. Everywhere its habit is to feed exclusively on the ground, in spite of possessing feet formed for climbing; but its very scanty plumage, slow laborious flight, and long square tail, so unsuitable in cold boisterous weather, show that the species is a still unmodified intruder from the region of perpetual summer many degrees nearer to the equator.

The Guira Cuckoo is about sixteen inches long, has red eyes and blue feet, and an orange-red beak. The crown of the head is deep rufous, and the loose hair-like feathers are lengthened into a pointed crest. The back and rump are white, the wings and other upper parts very deep fuscous, marked with white and pale brown. Under surface dull white, with hair-like black marks on the throat and breast. The tail is square, nine to ten inches long; the two middle feathers dark brown, the others three-coloured—yellow at the base, the middle portion dark glossy green, the ends white; and when the bird is flying the tail, spread out like a fan, forms a conspicuous and beautiful object.

During the inclement winter of Buenos Ayres the Guira Cuckoo is a miserable bird, and appears to suffer more than any other creature from cold. In the evening the flock, usually composed of from a dozen to twenty individuals, gathers on the thick horizontal branch of a tree sheltered from the wind, the birds crowding close together for warmth, and some of them roosting perched on the backs of their fellows. I have frequently seen them roosting three

GUIRA CUCKOO

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deep, one or two birds at the top to crown the pyramid ; but with all their huddling together a severe frost is sure to prove fatal to one or more birds in the flock ; and sometimes several birds that have dropped from the branch stiff with cold are found under the tree in the morning. If the morning is fair the flock betakes itself to some large tree, on which the sun shines, to settle on the outermost twigs on the northern side, each bird with its wings drooping, and its back turned towards the sun. In this spiritless attitude they spend an hour or two warming their blood and drying the dew from their scanty dress. During the day they bask much in the sun, and towards evening may be again seen on the sunny side of a hedge or tree warming their backs in the last rays. It is owing, no doubt, to its fecundity and to an abundance of food that the Guira Cuckoo is able to maintain its existence so far south in spite of its terrible enemy the cold.

With the return of warm weather this species becomes active, noisy, and the gayest of birds ; the flock constantly wanders about from place to place, the birds flying in a scattered desultory manner one behind the other, and incessantly uttering while on the wing a long complaining cry. At intervals during the day they also utter a kind of song, composed of a series of long modulated whistling notes, two-syllabled, the first powerful and vehement, and becoming at each repetition lower and shorter, then ending in a succession of hoarse internal sounds like the stertorous breathing of a sleeping man. When

approached all the birds break out into a chorus of alarm, with rattling notes so annoyingly loud and sustained that the intruder, be it man or beast, is generally glad to hurry out of ear-shot. As the breeding-season approaches they are heard, probably the males, to utter a variety of soft low chattering notes, sounding sometimes like a person laughing and crying together : the flock then breaks up into pairs, the birds becoming silent and very circumspect in their movements. The nest is usually built in a thorn-tree, of rather large sticks, a rough large structure, the inside often lined with green leaves plucked from the trees. The eggs are large for the bird, and usually six or seven in number ; but the number varies greatly, and I have known one bird lay as many as fourteen. They are elliptical in form and beautiful beyond comparison, being of an exquisite turquoise-blue, the whole shell roughly spattered with white. The white spots are composed of a soft calcareous substance, apparently deposited on the surface of the shell after its complete formation : they are raised, and look like snow-flakes, and when the egg is fresh-laid may be easily washed off with cold water, and are so extremely delicate that their purity is lost on the egg being taken into the hand. The young birds hatched from these lovely eggs are proverbial for their ugliness, *Pichon de Urraca* being a term of contempt commonly applied to a person remarkable for want of comeliness. They are as unclean as they are ugly, so that the nest, usually containing six or seven young, is unpleasant

both to sight and smell. There is something ludicrous in the notes of these young birds, resembling as they do the shrill half-hysterical laughter of a female exhausted by over-indulgence in mirth. One summer there was a large brood in a tree close to my home, and every time we heard the parent bird hastening to her nest with food in her beak, and uttering her plaintive cries, we used to run to the door to hear them. As soon as the old bird reached the nest they would burst forth into such wild extravagant peals and continue them so long that we could not but think it a rare amusement to listen to them.

According to Azara the Guira Cuckoo in Paraguay has very friendly relations with the Ani (*Crotophaga ani*), the birds consorting together in one flock, and even laying their eggs in one nest ; and he affirms that he has seen nests containing eggs of both species. These nests were probably brought to him by his Indian col' . . . who were in the habit of deceiving him, and it . . . e than probable that in this matter they were p . . . cusing on his credulity ; though it is certain that birds of different species do sometimes lay in one nest, as I have found—the Common Teal and the Tinamu for instance. I also doubt very much that the bird is ever polygamous, as Azara suspected ; but it frequently wastes eggs, and its procreant habits are sometimes very irregular and confusing, as the following case will show :

A flock numbering about sixteen individuals passed the winter in the trees about my home, and

in spring scattered about the plantation, screaming and chattering in their usual manner when about to breed. I watched them, and found that after a time the flock broke up into small parties of three or four, and not into couples, and I could not detect them building. At length I discovered three broken eggs on the ground, and on examining the tree overhead found an incipient nest composed of about a dozen sticks laid crossways and out of which the eggs had been dropped. This was in October, and for a long time no other attempt at a nest was made; but wasted eggs were dropped in abundance on the ground, and I continued finding them for about four months. Early in January another incipient nest was found, and on the ground beneath it six broken eggs. At the end of that month two large nests were made, each nest by one pair of birds, and in the two fourteen or fifteen young birds were reared.

When taken young the Guira Cuckoos become very tame, and make bold, noisy, mischievous pets, fond of climbing over and tugging at the clothes, buttons, and hair of their master or mistress. They appear to be more intelligent than most birds, and in a domestic state resemble the Magpie. I knew one tame Cuckoo that would carry off and jealously conceal bits of bright-coloured ribbon, thread, or cloth. In a wild state their food consists largely of insects, which they sometimes pursue running and flying along the ground. They also prey on mice and small reptiles, and carry off the fledglings from

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the nests of Sparrows and other small birds, and in spring they are frequently seen following the plough to pick up worms.

BLACK-BILLED CUCKOO

Coccyzus melanocoryphus

Above pale greyish brown; head cinereous, a black stripe through the eyes; beneath white, tinged with ochreous; tail black, tipped with white, the two central feathers like the back; length 11.5 inches. Female similar.

THE Coucou, so called from its note, is the commonest species of the genus in the Argentine Republic, and has an extensive range in South America. In September it migrates south, and a pair or a few individuals re-appear faithfully every spring in every orchard or plantation on the pampas. At intervals its voice is heard amidst the green trees—deep, hoarse, and somewhat human-like in sound, the song or call being composed of a series of notes, like the syllables *cou-cou-cou*, beginning loud and full, and becoming more rapid until at the end they run together. It is a shy bird, conceals itself from prying eyes in the thickest foliage, moves with ease and grace amongst the closest twigs, and feeds principally on large insects and caterpillars, for which it searches amongst the weeds and bushes near the ground.

The nest is the flimsiest structure imaginable, being composed of a few dry twigs, evidently broken

by the bird from the trees and not picked up from the ground. They are laid across each other to make a platform nest, but so small and flat is it that the eggs frequently fall out from it. That a bird should make no better preparation than this for the great business of propagation seems very wonderful. The eggs are three or four in number, elliptical in form, and of a dull sea-green colour.

There are three more species in Argentina of the characteristic American genus *Coccyzus*; one of these which I discovered to be an Argentine species being the common Yellow-billed Cuckoo of North America, *Coccyzus americanus*. I met with it in plantations on the pampas, but always in the late summer or autumn months—February to April—and am therefore unable to say whether or not it breeds in that district. It may be that this Cuckoo, like some of the Sandpipers and other shore birds of North America, extends its annual migration south to the pampas and Patagonia. But it is hardly believable that any Cuckoo could make that journey. If not, one must suppose that this Cuckoo, like the Purple Martin, has two races, which may have their meeting-ground in the tropics; at all events both winter in the tropics, and to breed one flies north in May, the other south in September.

Another interesting species is the Cinereous Cuckoo, *Coccyzus cinereus*, of a nearly uniform ashy grey colour with black bill. This Cuckoo is smaller than the preceding species, and also differs in having a square tail and a more curved beak. The

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beak is black, and the irides blood-red, which contrasts well with the blue-grey of the head, giving the bird a bold and striking appearance.

This species is not common, but it is, I believe, slowly extending its range southwards, as within the last few years it has become much more common than formerly. Like other Cuckoos, it is retiring in its habits, concealing itself in the dense foliage, and it cannot be attracted by an imitation of its call, an expedient which never fails with the Coucou. Its language has not that deep mysterious or *monkish* quality, as it has been aptly called, of other *Coccyzi*. Its usual song or call, which it repeats at short intervals all day long during the love-season, resembles the song of our little Dove (*Columbula picui*), and is composed of several long monotonous notes, loud, rather musical, but not at all plaintive. It also has a loud harsh cry, which one finds it hard to believe to be the voice of a Cuckoo, as in character it is more like the scream of a Dendrocolaptine species.

Of the thirty species of Cuckoos inhabiting South America eight are found in Argentina. Four of the five species described above were known to me ; the remaining three did not range so far south as Buenos Ayres—"my parish of Selborne," as I have ventured to call it in the *Naturalist in La Plata*—but they are such interesting birds that I cannot resist the temptation of giving a brief account of their habits in this place.

The Ani, *Crotophaga ani*, is about the size of our Magpie, and is one of the strangest of this strange

family, with the plumage and some of the habits of a crow, being almost entirely of a uniform black, glossed with bronze, dark green, and purple. Its most peculiar feature is the beak, which is greater in depth than in length, and resembles an immense Roman nose, occupying the whole face, and with the bridge bulging up above the top of the head. The Ani is found only in the northern portion of the Argentine territory. According to Azara it is very common in Paraguay, and goes in flocks, associating with the Guira Cuckoo, which it resembles in its manner of flight, in being gregarious, in feeding on the ground, and in coming a great deal about houses : in all which things these two species differ widely from most Cuckoos. He also says that it has a loud disagreeable voice, follows the cattle about in the pastures like the Cow-bird, and builds a large nest of sticks lined with leaves, in which as many as twenty or thirty eggs are frequently deposited, several females laying together in one nest. His account of these strange and disorderly breeding-habits has been confirmed by independent observers in other parts of the continent. The eggs are oval and outwardly white, being covered with a soft white cretaceous deposit ; but this can be easily scraped off, and under it is found a smooth hard shell of a clear beautiful blue colour.

The second species is the Brown Cuckoo, *Diplopterus nævius*, called *Crispin* in the vernacular and found throughout the hot portion of South America, and in different districts varying considerably in

size and colouring. It is about twelve inches long, the beak much curved ; the prevailing colour of the upper parts is light brown, the loose feathers on the head, which form a crest, deep rufous. The upper tail-coverts are long loose feathers of very unequal length, the longest reaching nearly to the end of the tail. The under surface is dirty white, or dashed with grey.

Azara says it is called *Chochi* in Paraguay, and has a clear, sorrowful note of two syllables, which it repeats at short intervals during the day, and also at night during the love-season. It is solitary, scarce, and excessively shy, escaping at the opposite side of the tree when approached, and when seen having the head and crest raised in an attitude of alarm. In the northern part of the Argentine country it is called *Crispin*, from its note which clearly pronounces that name. Mr. Barrows found it common at Concepcion on the Uruguay river, and has written the following notes about it :

" Several were taken in open bushy places, and many others were heard. It is a plain but attractive Cuckoo with a few-feathered crest, and long soft flowing upper tail-coverts. The note is very clear and penetrating, sounding much like the word 'crispin' slowly uttered, and with the accent on the last syllable. The birds are very shy, and I followed one for nearly an hour before I saw it at all, and nearly twice that time before any chance of a shot was offered. There is some peculiarity in the note which makes it impossible to tell whether the bird is

in front of or behind you—even when the note itself is distinctly heard. I know nothing of nest or eggs."

From personal observation I can say nothing about this species, as I never visited the district where it is found; but with the fame of the Crispin I have always been familiar, for concerning this Cuckoo the Argentine peasants have a very pretty legend. It is told that two children of a woodcutter, who lived in a lonely spot on the Uruguay, lost themselves in the woods—a little boy named Crispin and his sister. They subsisted on wild fruit, wandering from place to place, and slept at night on a bed of dry grass and leaves. One morning the little girl awoke to discover that her brother had disappeared from her side. She sprang up and ran through the woods to seek for him, but never found him; but day after day continued wandering in the thickets calling "*Crispin, Crispin,*" until at length she was changed into a little bird, which still flies through the woods on its never-ending quest, following every stranger who enters them, calling after him "*Crispin, Crispin*" if by chance it should be her lost brother.

The last species is the Chestnut Cuckoo, *Piaya cayana*. This is a widely spread form of Cuckoo in Central and South America, and reaches the northern territories of the Argentine Republic, having been obtained by Durnford near Tucuman, and by White in Misiones. The whole bird is about eighteen inches long, and the tail very long in proportion, about eleven inches. The entire plumage, except the breast and belly, which are grey, is chestnut colour. The

beak is very strong, and yellowish green in colour ; the irides ruby-red, the eyelids scarlet.

In Colombia this Cuckoo is said to be called *Pájaro ardilla* (Squirrel-bird), from its chestnut tint. It seems to feed chiefly, if not altogether, on the ground, and when perched always appears awkward and ill at ease. On a branch it sits motionless, until approached, and then creeps away through the leaves and escapes on the opposite side of the tree. This, however, is a habit common to most Cuckoos. Its language is a loud screaming cry, on account of which the Brazilians call it *Alma do gato*, implying that it possesses the soul of a cat. It is a very shy retiring bird, and in this respect is more like a *Coccyzus* than a *Guira*.

For these facts we are indebted to Leotaud, Fraser, Forbes, White, and others ; each of these observers having contributed a few words to a history of this interesting bird's habits.

PATAGONIAN PARROT

Conurus patagonus

Above dark olive-green ; wings edged with bluish ; lower part of back yellow ; beneath olive-green, darkest on throat ; whitish band across the neck ; belly yellow, with patch in the middle and thighs dark crimson ; length 18, wing 9.2, tail 10.5 inches. Female similar.

THIS Parrot, called in La Plata the Bank- or Burrowing-Parrot, from its nesting-habits, is the only member of its order found so far south as Patagonia.

In habits it differs somewhat from most of its congeners, and it may be regarded, I think, as one of those species which are dying out—possibly owing to the altered conditions resulting from the settlement of the country by Europeans. It was formerly abundant on the southern pampas of La Plata, and being partially migratory its flocks ranged in winter to Buenos Ayres, and even as far north as the Paraná river. When, as a child, I lived near the capital city (Buenos Ayres), I remember that I always looked forward with the greatest delight to the appearance of these noisy dark-green winter visitors. Now they are rarely seen within a hundred miles of Buenos Ayres; and I have been informed by old gauchos that half a century before my time they invariably appeared in immense flocks in winter, and have since gradually diminished in numbers, until now in that district the Bank-Parrot is almost a thing of the past. Two or three hundreds of miles south of Buenos Ayres city they are still to be met with in rather large flocks, and have a few ancient breeding-places, to which they cling very tenaciously. Where there are trees or bushes on their feeding-ground they perch on them; they also gather the berries of the *Empetrum rubrum* and other fruits from the bushes; but they feed principally on the ground, and while the flock feeds one bird is invariably perched on a stalk or other elevation to act as sentinel. They are partial to the seeds of the giant thistle (*Carduus mariana*) and the wild pumpkin, and to get at the latter they bite the hard dry shell into pieces with

their powerful beaks. When a horseman appears in the distance they rise in a compact flock, with loud harsh screams, and hover above him, within a very few yards of his head, their combined dissonant voices producing an uproar which is only equalled in that pandemonium of noises, the Parrot-house in the Zoological Gardens of London. They are extremely social, so much so that their flocks do not break up in the breeding-season ; and their burrows, which they excavate in a perpendicular cliff or high bank, are placed close together ; so that when the gauchos take the young birds—esteemed a great delicacy—the person who ventures down by means of a rope attached to his waist is able to rifle a colony. The burrow is three to five feet deep, and four white eggs are deposited on a slight nest at the extremity. I have only tasted the old birds, and found their flesh very bitter, scarcely palatable.

The natives say that this species cannot be taught to speak ; and it is certain that the few individuals I have seen tame were unable to articulate.

Doubtless these Parrots were originally stray colonists from the tropics, although now resident in so cold a country as Patagonia. When viewed closely one would also imagine that they must at one time have been brilliant-plumaged birds ; but either natural selection or the direct effect of a bleak climate has given a sombre shade to their colours—green, blue, yellow, and crimson ; and when seen flying at a distance, or in cloudy weather, they look as dark as crows.

GREEN PARRAKEET

Bolborhynchus monachus

Green; front grey; wings blackish with slight bluish edgings; beneath grey; bill whitish; length 11 inches. Female similar.

THE Common Green Parrakeet, called *Cotorra* or *Catita* in the vernacular, is a well-known resident species in the Argentine Republic. It is a lively, restless bird, shrill-voiced, and exceedingly vociferous, living and breeding in large communities, and though it cannot learn to speak so distinctly as some of the larger Parrots, it is impossible to observe its habits without being convinced that it shares in the intelligence of the highly-favoured order to which it belongs.

In Buenos Ayres it was formerly very much more numerous than it is now; but it is exceedingly tenacious of its breeding-places, and there are some few favoured localities where it still exists in large colonies, in spite of the cruel persecution all birds easily killed are subjected to in a country where laws relating to such matters are little regarded, and where the agricultural population is chiefly Italian. At Mr. Gibson's residence near Cape San Antonio, on the Atlantic coast, there is still a large colony of these birds inhabiting the Tala woods (*Celtis tala*), and I take the following facts from one of his papers, contributed many years ago to the *Ibis*, on the ornithology of the district.

He describes the woods as being full of their nests,

with their bright-coloured talkative denizens, and their noisy chatter all day long drowning every other sound. They are extremely sociable and breed in communities. When a person enters the wood, their subdued chatter suddenly ceases, and during the ominous silence a hundred pairs of black beady eyes survey the intruder from the nests and branches ; and then follow a whirring of wings and an outburst of screams that spread the alarm throughout the woods. The nests are frequented all the year, and it is rare to find a large one unattended by some of the birds any time during the day. In summer and autumn they feed principally on the thistle ; first the flower is cut up and pulled to pieces for the sake of the green kernel, and later they eat the fallen seed on the ground. Their flight is rapid, with quick flutters of the wings, which seem never to be raised to the level of the body. They pay no regard to a *Polyborus* or *Milvago* (the Carrion Eagle and Carrion Hawk), but mob any other bird of prey appearing in the woods, all the Parrakeets rising in a crowd and hovering about it with angry screams.

The nests are suspended from the extremities of the branches, to which they are firmly woven. New nests consist of only two chambers, the porch and the nest proper, and are inhabited by a single pair of birds. Successive nests are added, until some of them come to weigh a quarter of a ton, and contain material enough to fill a large cart. Thorny twigs, firmly interwoven, form the only material, and there is no lining in the breeding-chamber, even in the

breeding-season. Some old forest trees have seven or eight of these huge structures suspended from the branches, while the ground underneath is covered with twigs and remains of fallen nests. The entrance to the chamber is generally underneath, or if at the side is protected by an overhanging eave to prevent the intrusion of opossums. These entrances lead into the porch or outer chamber, and the latter communicates with the breeding-chamber. The breeding-chambers are not connected with each other, and each set is used by one pair of birds.

The number of pairs does not exceed a dozen, even with the largest nests. Repairs are carried on all the year round, but new nests are only added at the approach of spring. Opossums are frequently found in one of the higher chambers, when the entrance has been made too high, but though they take up their abode there they cannot reach the other chambers, and the Parrakeets refuse to go away. A species of Teal (probably *Querquedula brasiliensis*) also sometimes occupies and breeds in their chambers, and in one case Mr. Gibson found an opossum domiciled in an upper chamber, Parrakeets occupying all the others except one, in which a Teal was sitting on eggs.

The breeding-season begins about 1st November, and as many as seven or eight eggs are laid; these are dull white, very thin-shelled, elongated, and have the greatest diameter exactly equidistant from the two ends.

Mr. Barrows speaks as follows of this species in

Entrerios : " An abundant and familiar bird in the neighbourhood of Concepcion through the entire year. It is commonly seen in flocks of twenty and upwards, visiting grain-fields, gardens, etc., and sometimes, if I was correctly informed, completely stripping the grain-fields. They nest in communities, many pairs uniting in the building of a large common nest or mass of nests. I only saw these nests on two occasions, and had no opportunity of examining their structure. They were placed on high trees, and appeared from below to be simply irregular masses, six or eight feet in diameter, formed of small sticks and twigs. Where the nests are abundant the natives destroy the young by hundreds, and the ' squabs ' when nearly grown are said to be very fine eating. The young are easily tamed, and may be taught to articulate a few simple words."

SHORT-EARED OWL

Asio brachyotus

Above variegated with fulvous and blackish brown ; face whitish, with black centre ; wings pale tawny, with irregular broad blackish cross-bars ; tail whitish, with four or five broad black cross bands ; beneath as above, but paler ; bill black, eyes orange ; length 15, wing 13, tail 6 inches. Female similar but larger.

THERE are but six Owls known in Argentina, a very small number in so vast a country when we remember that England alone has five species without

counting the occasional visitants. It is also surprising to find that two of the Argentine owls are well-known British species—the Barn Owl and the wide-ranging Short-eared Owl. Of the six species I was acquainted with five, and will describe the two I knew most intimately, the Short-eared and the Burrowing Owls. The White or Barn Owl I occasionally saw in Buenos Ayres city, but always at night: the noble Magellanic Eagle Owl and the small Pigmy Owl I met with on the Rio Negro in Patagonia.

The Short-eared Owl is found throughout the Argentine country, where it is commonly called *Lechuzon* (Big Owl) in the vernacular. Like the Barn-Owl it has an exceedingly wide range. It is found throughout the continent of Europe; it also inhabits Asia and Africa, many of the Pacific Islands, and both Americas, from Canada down to the Straits of Magellan. Such a very wide distribution would seem to indicate that it possesses some advantage over its congeners, and is (as an Owl) more perfect than others. It is rather more diurnal in its habits than most Owls, and differs structurally from other members of its order in having a much smaller head. It is also usually said to be a weak flier; but this I am sure is a great mistake, for it seems to me to be the strongest flier amongst Owls, and very migratory in its habits, or, at any rate, very much given to wandering. Probably its very extensive distribution is due in some measure to a greater adaptability than

is possessed by most species; also to its better sight in the daytime, and to its wandering disposition, which enables it to escape a threatened famine, and to seize on unoccupied or favourable ground.

The bird loves an open country, and sits by day on the ground concealed amongst the herbage or tall grass. An hour before sunset it quits its hiding-place and is seen perched on a bush or tall stalk, or sailing about a few feet above the ground with a singularly slow, heron-like flight; and at intervals while flying it smites its wings together under its breast in a quick, sudden manner. It is not at all shy, the intrusion of a man or dog in the field it frequents only having the effect of exciting its indignation. An imitation of its cry will attract all the individuals within hearing about a person, and any loud unusual sound, like the report of a gun, produces the same effect. When alarmed or angry it utters a loud hiss, and at times a shrill laugh-like cry. It also has a dismal scream, not often heard; and at twilight hoots, this part of its vocal performance sounding not unlike the distant baying of a mastiff or a blood-hound. It breeds on the ground, clearing a circular spot, and sometimes, but not often, lining it with a scanty bed of dry grass. The eggs are three to five, white, and nearly spherical.

The Short-eared Owl was formerly common everywhere on the pampas, where the coarse indigenous grasses afforded the shelter and conditions best suited to it. When in time this old rough

vegetation gave place to the soft perishable grasses and clovers, accidentally introduced by European settlers, the Owl disappeared from the country, like the large Tinamu (*Rhynchosotis rufescens*), the Red-billed Finch (*Embernagra platensis*), and various other species; for the smooth level plains afforded it no shelter. Now, however, with the spread of cultivation, it has reappeared, and is once more becoming a common bird in the more settled districts.

BURROWING-OWL

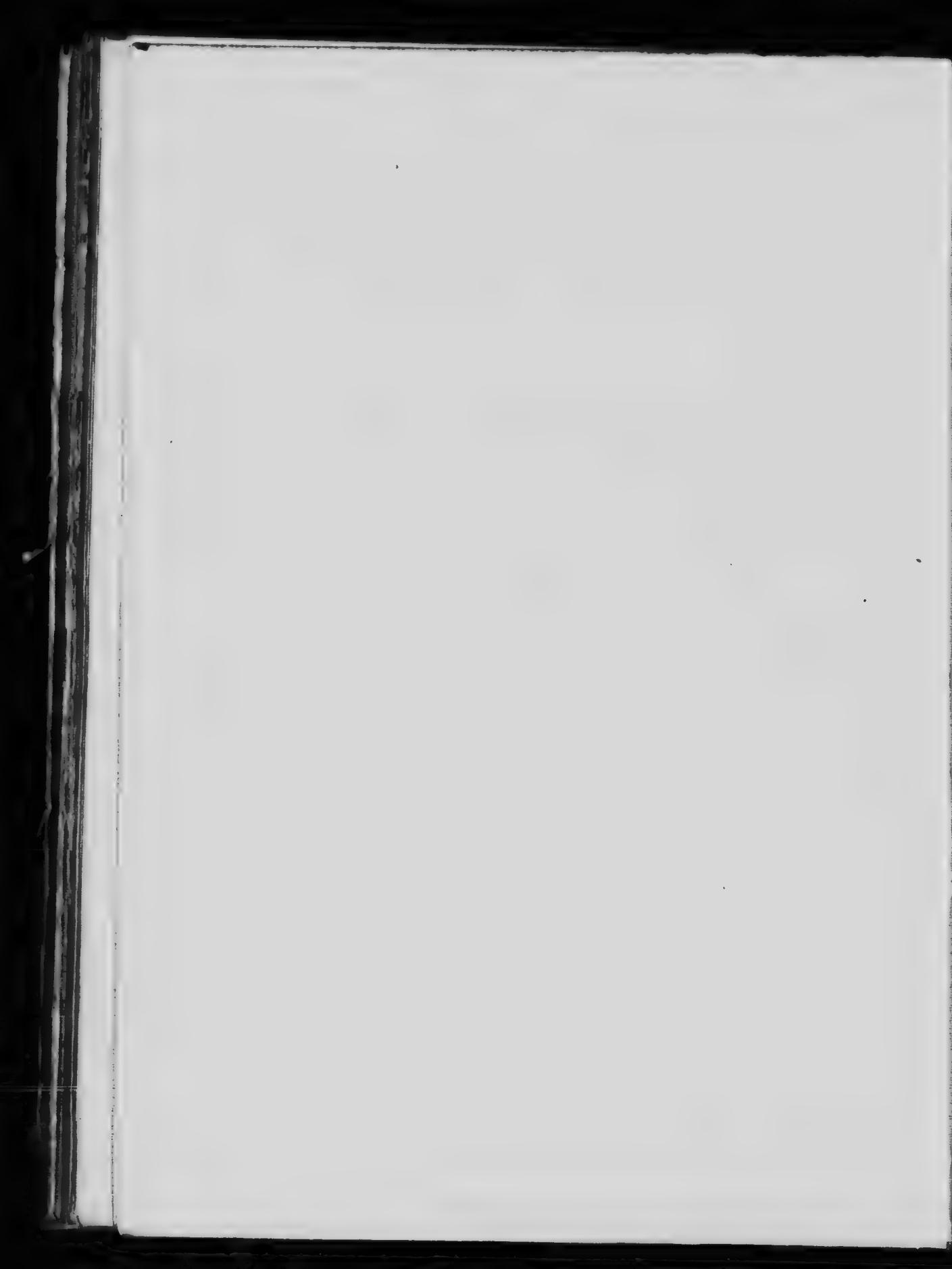
Speotyto cunicularia

Above dark sandy brown, with large white oval spots and small spots and freckles of pale brown; wings with broad whitish cross-bars; facial disk greyish brown; beneath white; length 10, wing 7.5, tail 3.5 inches. Female similar, but larger.

THE Burrowing-Owl is abundant everywhere on the pampas of Buenos Ayres and avoids woods, but not districts abounding in scattered trees and bushes. It sees much better than most Owls by day, and never affects concealment nor appears confused by diurnal sounds and the glare of noon. It stares fixedly—"with insolence," Azara says—at a passer-by, following him with the eyes, the round head turning about as on a pivot. If closely approached it drops its body or bobs in a curious fashion, emitting a brief scream, followed by three abrupt ejacula-



BURROWING-OWL
Speotyto cunicularia (Mol.)



tions ; and if made to fly goes only fifteen or twenty yards away, and alights again with face towards the intruder ; and no sooner does it alight than it repeats the odd gesture and scream, standing stiff and erect, and appearing beyond measure astonished at the intrusion. By day it flies near the surface with wings continuously flapping, and invariably before alighting glides upwards for some distance and comes down very abruptly. It frequently runs rapidly on the ground, and is incapable of sustaining flight long. Gaucho boys pursue these birds for sport on horseback, taking them after a chase of fifteen or twenty minutes. As a boy I have myself taken many. They live in pairs all the year, and sit by day at the mouth of their burrow or on the Vizcacha's mound, the two birds so close together as to be almost touching ; when alarmed they both fly away, but sometimes the male only, the female diving into the burrow. On the pampas it may be more from necessity than choice that they always sit on the ground, as they are usually seen perched on the summits of bushes where such abound, as in Patagonia.

These are the commonest traits of the Burrowing-Owl in the settled districts, where it is excessively numerous and has become familiar with man ; but in the regions hunted over by the Indians it is a scarce bird and has different habits. Shy of approach as a persecuted game-fowl, it rises to a considerable height in the air when the approaching traveller is yet far off, and flies often beyond sight before descending again to the earth. This wildness of disposition

is, without doubt, due to the active animosity of the pampas tribes, who have all the ancient widespread superstitions regarding the Owl. "Sister of the Evil Spirit" is one of their names for it ; they hunt it to death whenever they can, and when travelling will not stop to rest or encamp on a spot where an Owl has been spied. Where the country is settled by Europeans the bird has dropped its wary habits and become extremely tame. They are tenacious of the spot they live in, and are not easily driven out by cultivation. When the fields are ploughed up they make their kennels on their borders, or at the roadsides, and sit all day perched on the posts of the fences.

Occasionally they are seen preying by day, especially when anything passes near them, offering the chance of an easy capture. I have often amused myself by throwing bits of hard clay near one as it sat beside its kennel ; for the bird will immediately give chase, only discovering its mistake when the object is firmly clutched in its talons. When there are young to be fed, they are almost as active by day as by night. On hot November days multitudes of a large species of *Scarabæus* appear, and the bulky bodies and noisy bungling flight of these beetles invite the Owls to pursuit, and on every side they are seen pursuing and striking down the beetles, and tumbling upon them in the grass. Owls have a peculiar manner of taking their prey ; they grapple it so tightly in their talons that they totter and strive to steady themselves by throwing out their

wings, and sometimes, losing their balance, fall prostrate and flutter on the ground. If the animal captured be small they proceed after a while to despatch it with the beak ; if large they usually rise laboriously from the ground and fly to some distance with it, thus giving time for the wounds inflicted by the claws to do their work.

At sunset the Owls begin to hoot ; a short followed by a long note is repeated many times with an interval of a second of silence. There is nothing dreary or solemn in this performance ; the voice is rather soft and sorrowful, somewhat resembling the lowest notes of the flute in sound. In spring they hoot a great deal, many individuals responding to each other.

In the evening they are often seen hovering like a Kestrel at a height of forty feet above the surface, and continuing to do so fully a minute or longer without altering their position. They do not drop the whole distance at once on their prey, but descend vertically, tumbling and fluttering as if wounded, to within ten yards of the earth, and then, after hovering a few seconds more, glide obliquely on to it. They prey on every living creature not too large to be overcome by them. Sometimes when a mouse is caught they tear off the head, tail, and feet, devouring only the body. The hind quarters of toads and frogs are almost invariably rejected ; and inasmuch as these are the most fleshy and succulent parts, this is a strange and unaccountable habit. They make an easy conquest of a snake eighteen inches long, and kill it by

dealing it blows with the beak, hopping briskly about it all the time, apparently to guard themselves with their wings. They prey largely on the common *Coroneila anomala*, but I have never seen one attacking a venomous species. When they have young many individuals become destructive to poultry, coming about the houses and carrying off the chickens and ducklings by day. In seasons of plenty they destroy far more prey than they can devour; but in severe winters they come, apparently starving, about the houses, and will then stoop to carry off any dead animal food, though old and dried up as a piece of parchment. This I have often seen them do.

Though the Owls are always on familiar terms with the Vizcachas (*Lagostomus trichodactylus*) and occasionally breed in one of their disused burrows, as a rule they excavate a breeding-place for themselves. The kennel they make is crooked, and varies in length from four to twelve feet. The nest is placed at the extremity, and is composed of wool or dry grass, often exclusively of dry horse-dung. The eggs are usually five in number, white, and nearly spherical; the number, however, varies, and I have frequently found six or seven eggs in a nest. After the female has begun laying the birds continue carrying in dry horse-dung, until the floor of the burrow and a space before it is thickly carpeted with this material. The following spring the loose earth and rubbish is cleared out, for the same hole may serve them two or three years. It is always untidy,

but mostly so during the breeding-season, when prey is very abundant, the floor and ground about the entrance being often littered with castings, green beetle-shells, pellets of hair and bones, feathers of birds, hind quarters of frogs in all stages of decay, great hairy spiders (*Mygale*), remains of half-eaten snakes, and other unpleasant creatures that they subsist on. But all this carrion about the little Owl's disordered house reminds one forcibly of the important part the bird plays in the economy of nature. The young birds ascend to the entrance of the burrow to bask in the sun and receive the food their parents bring; when approached they become irritated, snapping with their beaks, and retreat reluctantly into the hole; and for some weeks after leaving it they make it a refuge from danger. Old and young birds sometimes live together for four or five months. I believe that nine-tenths of the Owls on the pampas make their own burrows, but as they occasionally take possession of the forsaken holes of mammals to breed in, it is probable that they would always observe this last habit if suitable holes abounded, as on the North American prairies inhabited by the marmot. Probably our Burrowing-Owl originally acquired the habit of breeding in the ground in the open level regions it frequented; and when this habit (favourable as it must have been in such unsheltered situations) had become ineradicable, a want of suitable burrows would lead it to clean out such old ones as had become choked up with rubbish, to deepen such as were too shallow, and ultimately

to excavate for itself. The mining instinct varies greatly in strength, even on the pampas. Some pairs, long mated, only begin to dig when the breeding season is already on them ; others make their burrows as early as April—that is, six months before the breeding-season. Generally both birds work, one standing by and regarding operations with an aspect of grave interest, and taking its place in the pit when the other retires ; but sometimes the female has no assistance from her partner, and the burrow then is very short. Some pairs work expeditiously and their kennel is deep and neatly made ; others go about their task in a perfunctory manner, and begin, only to abandon, perhaps half a dozen burrows, and then rest two or three weeks from their unprofitable labours. But whether industrious or indolent, by September they all have their burrows made. I can only account for Azara's unfortunate statement, repeated by scores of compilers, that the Owl never constructs its own habitations, by assuming that a century ago, when he lived and when the country was still very sparsely settled, this Owl had not yet become so abundant or laid aside the w-y habit the aborigines had taught it, so that he did not become very familiar with its habits.

ARGENTINE HEN-HARRIER

Circus cinereus

Above light bluish grey with darker mottlings; primaries blackish; tail grey with four black cross bands and tipped with white; beneath thickly banded with white and rufous bars; bill black, eyes and feet yellow; length 18, wing 12 inches. Female larger; above dark brown, with light brown spots.

THERE are two species of Harriers in Argentina, the Broad-winged Harrier, *C. macropterus*, with a black upper and white lower plumage, and the present species, named Cinereous Harrier in *Argentine Ornithology*, but I prefer now to call it the Argentine Hen-Harrier, as at a distance it closely resembles the European Hen-Harrier, although a handsomer bird.

This hawk is found throughout the Argentine Republic, and is also common in Patagonia and the Falkland Islands. On the pampas it is, I think, the most common bird of prey, after the excessively abundant *Milvago chimango*. Like the Chimango it also prefers an open unwooded country, and resembles that bird not a little in its general appearance, and when in the brown stage of plumage may be easily mistaken for it. In the Falklands it has even acquired the Carrion Hawk's habits, for Darwin distinctly saw one feeding on a carcase there, very much to his surprise. On the pampas I have always found it a diligent bird-hunter, and its usual mode of proceeding is to drive up the bird from the grass

and to pursue and strike it down with its claws. Mr. Gibson's account of its habits agrees with mine, and he says that "it will raise any small bird time after time, should the latter endeavour to conceal itself in the grass, preferring, as it would seem, to strike it on the wing." He further says: "Its flight is low and rather rapid, while if its quarry should double it loses no ground, for it turns something in the manner of a Tumbler Pigeon, going rapidly head over heels in the most eccentric and amusing fashion."

Probably this Harrier has a partial migration, as a great many are always seen travelling across the pampas in the autumn and spring; many individuals, however, remain all the winter.

The nest is made on the ground among long grass, or in reed-beds in marshy places, and the eggs are white, blotched with dark red.

VOCIFEROUS HAWK

Asturina pucherani

Above dark brown; upper tail-coverts fulvous, barred with brown; wings chestnut barred and broadly tipped with black; tail fulvous, crossed with four black bars; beneath pale ochraceous, barred with rufous; bill black, feet yellow; length 18 inches. Female larger.

THIS brown-plumaged, short-winged, and exceedingly vociferous Hawk is common in the woods along the shores of the Plata and its tributaries, and is never found far removed from water. It perches

WHITE-TAILED BUZZARD 45

on the summit of a tree, and sits there motionless for hours at a time, and at intervals utters singularly long, loud cries, which become more frequent and piercing when the bird is disturbed, as by the approach of a person. Its flight is rapid and irregular, the short blunt wings beating unceasingly, while the bird pours out a succession of loud, vehement, broken screams.

Mr. Barrows observed it on the Lower Uruguay, and writes : " It feeds largely if not exclusively on fish, nearly every specimen having their remains (and nothing else) in their stomachs." It would be very interesting to learn how it captures its prey.

WHITE-TAILED BUZZARD

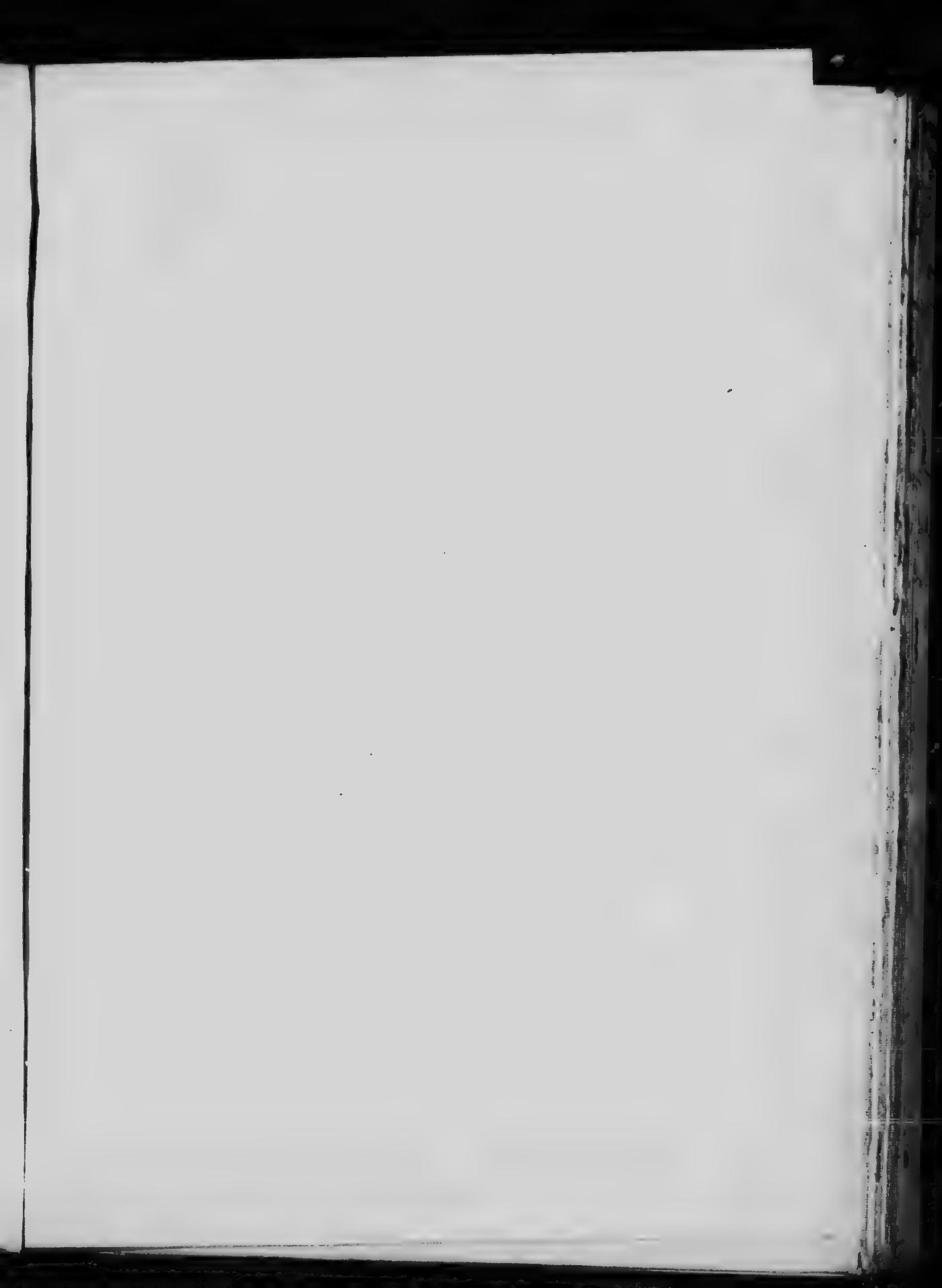
Buteo albicaudatus

Above greyish black, scapulars and upper wing coverts ferruginous ; rump and tail white, the latter with a broad black band ; throat black, beneath white ; bill black, feet yellow ; length 21, wing 18 inches. Female similar but larger.

THIS Buzzard does not breed on the pampas, where I have observed it, but appears there in the spring and autumn, irregularly, when migrating, and in flocks which travel in a loitering, desultory manner. The flocks usually number from thirty or forty to a hundred birds, but sometimes many more. I have seen flocks which must have numbered from one to

two thousand birds. When flying the flock is very much scattered, and does not advance in a straight line, but the birds move in wide circles at a great height in the air, so that a person on horseback travelling at a canter can keep directly under them for two or three hours. On the ground one of these large flocks will sometimes occupy an area of half a square league, so widely apart do the birds keep. I have dissected a great many and found nothing but coleopterous insects in their stomachs ; and indeed they would not be able to keep in such large companies when travelling if they required a nobler prey.

At the end of one summer a flock numbering about two hundred birds appeared at an estancia near my home, and though very much disturbed they remained for about three months, roosting at night on the plantation trees, and passing the day scattered about the adjacent plain, feeding on grasshoppers and beetles. This flock left when the weather turned cold ; but at another estancia a flock appeared later in the season and remained all the winter. The birds became so reduced in flesh that after every cold rain or severe frost numbers were found dead under the trees where they roosted ; and in that way most of them perished before the return of spring.





RED-BACKED BUZZARD

Buteo erythronotus (King)

RED-BACKED BUZZARD

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RED-BACKED BUZZARD

Buteo erythronotus

Above slatey blue; wing feathers slatey with narrow black bars; upper tail-coverts and tail white, the latter crossed with narrow grey bars and broad black band; beneath white; bill dark horn-colour; feet yellow; length 25, wing 18.5 inches. Female similar, but back deep chestnut.

THIS is a fine bird—the king of South-American Buzzards. In the adult female the three colours of the plumage are strongly contrasted; the back being rusty rufous, the rest of the upper parts grey, the whole under surface pure white. It is occasionally met with in the northern provinces of the Argentine Republic, but is most common in Patagonia; and it has been said that in that region it takes the place of the nearly allied *Buteo albicaudatus* of Brazil. In habits, however, the two species are as different as it is possible for two Raptore to be; for while the northern bird has a cowardly spirit, is, to some extent, gregarious, and feeds largely on insects, the Patagonian species has the preying habits of the Eagle and lives exclusively, I believe, or nearly so, on cavies and other small mammals. When Captain King first discovered it in 1827, he described it as "a small beautiful Eagle." In Patagonia it is very abundant, and usually seen perched on the summit of a bush, its broad snowy-white bosom conspicuous to the eye at a great distance—one of the most familiar features in the monotonous landscape of

that grey country. The English colonists on the Chupat, Durnford says, call it the "White Horse," owing to its conspicuous white colour often deceiving them when they are out searching for strayed horses in the hills. It is a wary bird, and when approached has the habit of rising up in widening circles to a vast height in the air. When sailing about in quest of prey it usually maintains a height of fifty or sixty yards above the surface. The stomachs of all the individuals I have examined contained nothing but the remains of cavies (*Cavia australis*).

The nest is built on the top of a thorn bush, and is a large structure of sticks, lined with grass, fur, dry dung, and other materials. The eggs are greyish white in colour, blotched and marked, principally towards the large end, with two shades of umber-brown.

GREY EAGLE

Geranoëtes melanoleucus

Above black wings grey with narrow transverse black bars; tail black; throat grey; breast black with round whitish spots; abdomen white; bill horn-colour, feet yellow; length 26, wing 19 inches.

THE Grey or Chilian Eagle, like most diurnal birds of prey, undergoes many changes of colour, the plumage at different periods having its brown, black, and grey stages: in the old birds it is a uniform dark grey, and the under surface white. Throughut the

Argentine country this is the commonest Eagle, and I found it very abundant in Patagonia. D'Orbigny describes it with his usual prolixity—pardonably so in this case, however, the bird being one of the very few species with which he appears to have become familiar from personal observation. He says that it is a wary bird; pairs for life, the male and female never being found far apart; and that it soars in circles with a flight resembling that of a Vulture; and that the form of its broad blunt wings increases its resemblance to that bird. Cavies and small mammals are its usual prey; and in the autumn and winter, when the Pigeons congregate in large numbers, it follows their movements. During the Pigeon-season he has counted as many as thirty Eagles in the course of a three leagues' ride; and he has frequently seen an Eagle swoop down into a cloud of Pigeons, and invariably reappear with one struggling in its talons. It is seldom found far from the shores of the sea or of some large river; and on the Atlantic coast, in Patagonia, it soars above the sands at ebb-tide, looking out for stranded fish, carcasses of seals, and other animal food left by the retiring waters, and quarrels with Condors and Vultures over the refuse, even when it is quite putrid. It acts as a weather prognostic, and before a storm is seen to rise in circles to a vast height in the air, uttering piercing screams, which may be heard after it has quite disappeared from sight.

The nest of this species is usually built on the ledge of an inaccessible rock or precipice, but not

infrequently on a tree. Mr. Gibson describes one, which he found on the top of a thorn-tree, as a structure of large sticks, three feet in diameter, the hollow cushioned with dry grass. It contained two eggs, dull white, marked with pale reddish blotches.

Mr. Gibson compared its cry to a "wild human laugh," and also writes : " Its whereabouts may often be detected by an attendant flock of Caranchos (*Polyborus tharus*), particularly in the case of a young bird. As soon as it rises from the ground or from a tree, these begin to persecute it, ascending spirally also, and making dashes at it, while the Eagle only turns its head watchfully from side to side, the mere action being sufficient to avert the threatened collision."

Gay, in his *Natural History of Chili*, describes the affectionate and amusing habits of an Eagle of this species which he had tamed. It took great delight in playing with his hand, and would seize and pretend to bite one of his fingers, but really with as much tenderness as a playful dog displays when pretending to bite its master. It used also to amuse itself by picking up a pebble in its beak, and with a jerk of its head toss it up in the air, then seize it in its claws when it fell, after which it would repeat the performance.

CROWNED EAGLE

Harpyhaliaetus coronatus

Above ashy brown, with a long crest of darker feathers; wings grey with blackish tips; tail black with a broad white median band and white tip; beneath pale ashy brown; length 33, wing 22 inches. Female similar but larger.

I MET with this fine Eagle on the Rio Negro, in Patagonia, where d'Orbigny also found it; the entire Argentine territory comes, however, within its range. Having merely seen it perched on the tall willows fringing the Rio Negro, or soaring in wide circles far up in the sky, I cannot venture to speak of its habits, while the account of them which d'Orbigny built up is not worth quoting, for he does not say how he got his information. One of his statements would, if true, be very important indeed. He says that his attention was drawn to a very curious fact concerning the Crowned Harpy, which was, that this bird preys chiefly on the skunk—an animal, he very truly adds, with so pestilential an odour that even the most carnivorous of mammals are put to flight by it; that it is the only bird of prey that kills the skunk, and that it does so by precipitating itself from a vast height upon its quarry, which it then quickly despatches. It would not matter at all whether the Eagle dropped from a great or a moderate height, for in either case the skunk would receive its enemy with the usual pestilent discharge. D'Orbigny's account is, however, pure conjecture,

and though he does not tell us what led him to form such a conclusion, I have no doubt that it was because the Eagle or Eagles he obtained had the skunk-smell on their plumage. Most of the Eagles I shot in Patagonia, including about a dozen Chilian Eagles, smelt of skunk, the smell being in most cases old and faint. Of two Crowned Harpies obtained, only one smelt of skunk. This only shows that in Patagonia Eagles attack the skunk, which is not strange considering that it is of a suitable size and conspicuously marked ; that it goes about fearlessly in the daytime and is the most abundant animal, the small cavy excepted, in that sterile country. But whether the Eagles succeed in their attacks on it is a very different matter. The probability is that when an Eagle, incited by the pangs of hunger, commits so great a mistake as to attack a skunk, the pestilent fluid, which has the same terribly burning and nauseating effects on the lower animals as on man, very quickly makes it abandon the contest. It is certain that pumas make the same mistake as the Eagles do, for in some that are caught the fur smells strongly of skunk. It might be said that the fact that many Eagles smell of skunk serves to show that they do feed on them, for otherwise they would learn by experience to avoid so dangerous an animal, and the smell of a first encounter would soon wear off. I do not think that hungry birds of prey, in a barren country like Patagonia, would learn from one repulse, or even from several, the fruitlessness and danger of such attacks ; while the smell is so marvellously persistent that one or

two such attacks a year on the part of each Eagle would be enough to account for the smell on so many birds. If skunks could be easily conquered by Eagles, they would not be so numerous or so neglectful of their safety as we find them.

PEREGRINE FALCON

Falco peregrinus

Above plumbeous, lightest on the rump, more or less distinctly barred with black; head and cheeks black; beneath white tinged with cinnamon; abdomen and thighs traversed by narrow black bands; cere and feet yellow; length 20, wing 14 inches. Female similar; a third larger.

THE Peregrine Falcon is found throughout the Argentine Republic, but is nowhere numerous, and is not migratory; nor is it "essentially a duck-hawk," as in India according to Dr. Anderson, for it preys chiefly on land birds. It is solitary, and each bird possesses a favourite resting-place or *home*, where it spends several hours every day, and also roosts at night. Where there are trees it has chosen site where it may always be found at noon, but on the open treeless pampas a mound of earth or the bleached skull of a horse or cow serves it for a perch, and here for months the bird may be found every day on its stand. It sits upright and motionless, springs suddenly into the air when taking flight, and flies in a straight line, and with a velocity which few birds can equal. Its appearance always causes great

consternation amongst other birds, for even the Spur-winged Lapwing, the spirited persecutor of all other Hawks, flies screaming with terror from it. It prefers attacking moderately large birds, striking them on the wing, after which it stoops to pick them up. While out riding one day I saw a Peregrine sweep down from a great height and strike a Burrowing-Owl to the earth, the Owl having risen up before me. It then picked it up and flew away with it in its talons.

The Peregrine possesses one very curious habit. When a Plover, Pigeon, or Duck is killed, it eats the skin and flesh of the head and neck, picking the vertebræ clean of the flesh down to the breast-bone, and also eating the eyes, but leaving the body untouched. I have found scores of dead birds with head and neck picked clean in this way; and once I watched for some months a Peregrine which had established itself near my home, where it made havoc among the Pigeons: and I frequently marked the spot to which it carried its prey, and on going to the place always found that the Pigeon's head and neck only had been stripped of flesh. The Burrowing Owl has an analogous habit, for it invariably rejects the hind quarters of the toads and frogs which it captures.

At the approach of the warm season the Peregrines are often seen in twos and threes violently pursuing each other at a great height in the air, and uttering shrill, piercing screams, which can be heard distinctly after the birds have disappeared from sight.

ARGENTINE HOBBY

Falco fuscocerulescens

Above dull slatey black, rump variegated with white; superciliaries prolonged and meeting behind, rufous; beneath throat and breast pale cinnamon with black shaft-stripes on the breast; belly black with white transverse lines; wings and tail blackish with transverse white bars; bill yellow tipped with black, feet orange; length 13.5, wing 10 inches. Female similar but larger.

THE Orange-chested Hobby is found throughout South and Central America, but the form met with here differs, to some extent, in habits from its representatives of the hotter region. It is a Patagonian bird, the most common Falcon in that country, and is migratory, wintering in the southern and central Argentine provinces. In its winter home it is solitary, and fond of hovering about farmhouses, where it sits on a tree or post and looks out for its prey. Compared with the Peregrine it has a poor spirit, and I have often watched it give chase to a bird, and just when it seemed about to grasp its prey, give up the pursuit and slink ingloriously away. It never boldly and openly attacks any bird, except of the smallest species, and prefers to perch on an elevation from which it can dart down suddenly and take its prey by surprise.

The nest is a slovenly structure of sticks on a thorny bush or tree. The eggs, which I have not seen, Darwin describes as follows: "Surface rough with white projecting points; colour nearly uniform dirty wood-brown; general appearance as if it had been rubbed in brown mud."

ARGENTINE KESTREL

Tinnunculus cinnamominus

Above reddish cinnamon with irregular black cross bands on the back; head bluish grey; front and sides of head white; nape and stripes on the sides of the neck black; wings bluish grey with black central spots; tail cinnamon red with broad black band and white tip; beneath white with buff tinge, and irregular oval black spots; length 10.5, wing 7.7 inches. Female similar but larger.

THE habits of this little Falcon closely resemble those of *Falco fusco-cærulescens*, and like that bird it is common in Patagonia and migrates north in winter. Many individuals, however, do not migrate, as I found when residing at the Rio Negro, where some pairs remained at the breeding-place all the year. Many pairs are also found resident and breeding in other parts of the Argentine country, but it is common only in Patagonia.

It nests in holes in cliffs and also on trees, and sometimes builds its own nest on the large nest of a Dendrocolaptine bird or of a Parrakeet. It lays four eggs, large for the size of the bird, oval in shape, and white, thickly blotched with dull red.

The preying habits of the Little Kestrel are similar to those of the Orange-chested Hobby; it haunts farmhouses and plantations, and spends a great deal of time perched on some elevation watching for its prey, and making sudden dashes to capture it by surprise. But though not bold when seeking its food, it frequently makes violent unprovoked attacks on species very much larger than itself, either

from ill-temper or in a frolicsome spirit, which is more probable.

Thus I have seen one drive up a flock of Glossy Ibises and pursue them some distance, striking and buffeting them with the greatest energy. I saw another pounce down from its perch, where it had been sitting for some time, on a female skunk quietly seated at the entrance of her burrow, with her three half-grown young, frolicking around her. I was watching them with extreme interest, for they were leaping over their parent's tail, and playing like kittens with it, when the Hawk dashed down, and after striking at them quickly three or four times, as they tumbled pell-mell into their kennel, flew quietly away, apparently well satisfied with its achievement.

WHITE KITE

Elanus leucurus

Above pale grey; lesser wing-coverts and scapulars black; tail white, the two middle feathers grey; beneath white; bill black, eyes crimson; feet yellow; length 14.5, wing 11, tail 7 inches. Female similar but larger.

THIS interesting Hawk is found throughout the Argentine Republic, but is nowhere numerous. It also inhabits Chili, where, Gay says, it is called *Bailarin* (Dancer) on account of its aerial performances. It is a handsome bird, with large ruby-red irides, and when seen at a distance its snow-white

plumage and buoyant flight give it a striking resemblance to a gull. Its wing-power is indeed marvellous. It delights to soar, like the Martins, during a high wind, and will spend hours in this sport, rising and falling alternately, and at times, seeming to abandon itself to the fury of the gale, is blown away like thistle-down, until, suddenly recovering itself, it shoots back to its original position. Where there are tall Lombardy poplar-trees these birds amuse themselves by perching on the topmost slender twigs, balancing themselves with outspread wings, each bird on a separate tree, until the tree-tops are swept by the wind from under them, when they often remain poised almost motionless in the air until the twigs return to their feet.

When looking out for prey, this Kite usually maintains a height of sixty or seventy feet above the ground, and in its actions strikingly resembles a fishing Tern, frequently remaining poised in the air with body motionless and wings rapidly vibrating for fully half a minute at a stretch, after which it flies on or dashes down upon its prey.

The nest is placed upon the topmost twigs of a tall tree, and is round and neatly built of sticks, rather deep, and lined with dry grass. The eggs are eight in number, nearly spherical, the ground-colour creamy-white, densely marked with longitudinal blotches or stripes of a fine rich red, almost like coagulated blood in hue. There is, however, great variety in the shades of red, also in the disposition of the markings, these in some eggs being confluent,

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so that the whole shell is red. The shell is polished and exceedingly fragile, a rare thing in the eggs of a Raptor.

An approach to the nest is always greeted by the birds with long distressful cries, and this cry is also uttered in the love-season, when the males often fight and pursue each other in the air. The old and young birds usually live together until the following spring.

SOCIABLE MARSH-HAWK

Rstrohamus sociabilis

Deep slatey grey; wing feathers black; rump white; tail white with a broad grey band; eyes crimson, bill and feet orange; length 17, wing 13 inches. Female similar but larger.

THIS Hawk in size and manner of flight resembles a Buzzard, but in its habits and the form of its slender and very sharply hooked beak it differs widely from that bird. The name of Sociable Marsh-Hawk, which Azara gave to this species, is very appropriate, for they invariably live in flocks of from twenty to a hundred individuals, and migrate and even breed in company. In Buenos Ayres they appear in September and resort to marshes and streams abounding in large water-snails (*Ampullaria*), on which they feed exclusively. Each bird has a favourite perch or spot of ground to which it carries every snail it captures, and after skilfully extracting the animal with its curiously modified beak, it drops the shell

on the mound. When disturbed or persecuted by other birds, they utter a peculiar cry, resembling the shrill neighing of a horse. In disposition they are most peaceable, and where they are abundant all other birds soon discover that they are not as other Hawks are and pay no attention to them. When soaring, which is their favourite pastime, the flight is singularly slow, the bird frequently remaining motionless for long intervals in one place ; but the expanded tail is all the time twisted about in the most singular manner, moved from side to side, and turned up until its edge is nearly at a right angle with the plane of the body. These tail-movements appear to enable it to remain stationary in the air without the rapid vibratory wing-motions practised by *Elanus leucurus* and other hovering birds ; and I should think that the vertebræ of the tail must have been somewhat modified by such a habit.

Concerning its breeding habits Mr. Gibson writes : " In the year 1873 I was so fortunate as to find a breeding colony in one of our largest and deepest swamps. There were probably twenty or thirty nests, placed a few yards apart, in the deepest and most lonely part of the whole ' cañadon.' They were slightly built platforms, supported on the rushes and two or three feet above the water, with the cup-shaped hollow lined with pieces of grass and water-rush. The eggs never exceeded three in a nest ; the ground-colour generally bluish-white, blotched and clouded very irregularly with dull red-brown, the rufous tint sometimes being replaced with ash-grey."

PIGMY FALCON

Spizapteryx circumcinctus

Above brown with black shaft-stripes ; head black with brown stripes and white superciliaires which join round the nape ; rump white ; wings black with white oval spots on the outer and white bars on the inner webs ; tail black, all but the central feathers crossed by five or six broad white bars ; beneath white, the breast marked with narrow black shaft-stripes ; beak plumbeous, lower mandible yellow ; feet greenish ; length 11, wing 6.5 inches. Female similar, rather larger.

THIS small Hawk is sometimes met with in the woods of La Plata, near the river ; it is rare, but owing to its curious violent flight, with the short blunt wings rapidly beating all the time, it is very conspicuous in the air and well known to the natives, who call it *Rey de los Pájaros* (King of the Birds) and entertain a very high opinion of its energy and strength. I have never seen it taking its prey, and do not believe that it ever attempts to capture anything in the air, its short, blunt wings and peculiar manner of flight being unsuited for such a purpose. Probably it captures birds by a sudden dash when they mob it on its perch ; and I do not know any Raptor more persistently run after and mobbed by small birds. I once watched one for upwards of an hour as it sat on a tree attended by a large flock of Guira Cuckoos, all excitedly screaming and bent on dislodging it from its position. So long as they kept away five or six feet from it the Hawk remained motionless, only hissing and snapping occasionally as a warning ; but whenever a Cuckoo ventured a

little nearer and into the charmed circle, it would make a sudden rapid dash and buffet the intruder violently back to a proper distance, returning afterwards to its own stand.

CHIMANGO, OR COMMON CARRION HAWK

Milvago chimango

Upper plumage reddish brown; greater wing-coverts white with slight brown cross-bars; tail greyish white, banded and freckled with greyish brown. Under plumage grey, tinged with rufous on throat and breast; length 15, wing 11, tail 6.5 inches. Sexes alike.

AZARA says of the Carancho (*Polyborus tharos*): "All methods of subsistence are known to this bird: it pries into, understands, and takes advantage of everything." These words apply better to the Chimango, which has probably the largest bill of fare of any bird, and has grafted on to its own peculiar manner of life the habits of twenty diverse species. By turns it is a Falcon, a Vulture, an insect-eater, and a vegetable-eater. On the same day you will see one bird in violent Hawk-like pursuit of its living prey, with all the instincts of rapine hot within it, and another less ambitious individual engaged in laboriously tearing at an old cast-off shoe, uttering mournful notes the while, but probably more concerned at the tenacity of the material than at its indigestibility.

A species so cosmopolitan in its tastes might have

had a whole volume to itself in England ; being only a poor foreigner it has had no more than a few unfriendly paragraphs bestowed upon it. For it happens to be a member of that South-American sub-family of which even grave naturalists have spoken slightly, calling them vile, cowardly, contemptible birds ; and the Chimango is nearly least of them all—a sort of poor relation and hanger-on of a family already looked upon as bankrupt and disreputable. Despite this evil reputation, few species are more deserving of careful study ; for throughout an extensive portion of South America it is the commonest bird we know ; and when we consider how closely connected are the lives of all living creatures by means of their interlacing relations, so that the predominance of any one kind, however innocuous, necessarily causes the modification, or extinction even, of surrounding species, we are better able to appreciate the importance of this despised fowl in the natural polity. Add to this its protean habits, and then, however poor a creature our bird may seem, and deserving of strange-sounding epithets from an ethical point of view, I do not know where the naturalist will find a more interesting one.

The Chimango has not an engaging appearance. In size and figure it much resembles the Hen-Harrier, and the plumage is uniformly of a light sandy brown colour ; the shanks are slender, claws weak, and beak so slightly hooked that it seems like the merest apology of the Falcon's tearing weapon. It has an

easy, loitering flight, and when on the wing does not appear to have an object in view, like the Hawk, but wanders and prowls about here and there, and when it spies another bird it flies after him to see if he has food in his eye. When one finds something to eat the others try to deprive him of it, pursuing him with great determination all over the place; if the foremost pursuer flags, a fresh bird takes its place, until the object of so much contention—perhaps after all only a bit of bone or skin—is dropped to the ground, to be instantly snatched up by some bird in the tail of the chase; and he in turn becomes the pursued of all the others. This continues until one grows tired and leaves off watching them without seeing the result. They are loquacious and sociable, frequently congregating in loose companies of thirty or forty individuals, when they spend several hours every day in spirited exercises, soaring about like Martins, performing endless evolutions, and joining in aerial mock battles. When tired of these pastimes they all settle down again, to remain for an hour or so perched on the topmost boughs of trees or on other elevations; and at intervals one bird utters a very long, leisurely chant, with a falling inflection, followed by a series of short notes, all the other birds joining in chorus and uttering short notes in time with those of their soloist or precentor. The nest is built on trees or rushes in swamps, or on the ground amongst grass and thistles. The eggs are three or four in number, nearly spherical, blotched with deep red on a white

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or creamy ground ; sometimes the whole egg is marbled with red ; but there are endless varieties. It is easy to find the nest, and becomes easier when there are young birds, for the parent when out foraging invariably returns to her young uttering long mournful notes, so that one has only to listen and mark the spot where it alights. After visiting a nest I have always found the young birds soon disappear, and as the old birds vanish also I believe that the Chimango removes its young when the nest has been discovered—a rare habit with birds.

Chimangos abound most in settled districts, but a prospect of food will quickly bring numbers together even in the most solitary places. On the desert pampas, where hunters, Indian and European, have a great fancy for burning the dead grass, the moment the smoke of a distant fire is seen there the Chimangos fly to follow the conflagration. They are at such times strangely animated, dashing through clouds of smoke, feasting among the hot ashes on roasted cavies and other small mammals, and boldly pursuing the scorched fugitives from the flames.

At all times and in all places the Chimango is ever ready to pounce on the weak, the sickly, and the wounded. In other regions of the globe these doomed ones fall into the clutches of the true bird of prey ; but the salutary office of executioner is so effectually performed by the Chimango and his congeners where these false Hawks abound, that the true Hawks have a much keener struggle to exist



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here. This circumstance has possibly served to make them swifter of wing, keener of sight, and bolder in attack than elsewhere. I have seen a Buzzard, which is not considered the bravest of the Hawks, turn quick as lightning on a Spur-wing Lapwing, which was pursuing it, and, grappling it, bear it down to the ground and despatch it in a moment, though a hundred other Lapwings were uttering piercing screams above it. Yet this Plover is a large, powerful, fierce-tempered bird, and armed with sharp spurs on its wings. This is but one of numberless instances I have witnessed of the extreme strength and daring of our Hawks.

When shooting birds to preserve I used to keep an anxious eye on the movements of the Chimangos flying about, for I have had some fine specimens carried off or mutilated by these omnipresent robbers. One winter day I came across a fine *Myiotheretes rufiventris*, a pretty and graceful Tyrant-bird, rather larger than the Common Thrush, with a chocolate and silver-grey plumage. It was rare in that place, and, anxious to secure it, I fired a very long shot, for it was extremely shy. It rose up high in the air and flew off apparently unconcerned. What then was my surprise to see a Chimango start off in pursuit of it! Springing on to my horse I followed, and before going half a mile noticed the Tyrant-bird beginning to show signs of distress. After avoiding several blows aimed by the Chimango, it flew down and plunged into a cardoon bush. There I captured it, and when skinning it to preserve found that one

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small shot had lodged in the fleshy portion of the breast. It was a very slight wound, yet the Chimango with its trained sight had noticed something wrong with the bird from the moment it flew off, apparently in its usual free, buoyant manner.

On another occasion I was defrauded of a more valuable specimen than the Tyrant-bird. It was on the east coast of Patagonia, when one morning, while seated on an elevation, watching the waves dashing themselves on the shore, I perceived a shining white object tossing about at some distance from land. Successive waves brought it nearer, till at last it was caught up and flung far out on to the shingle fifty yards from where I sat; and instantly, before the cloud of spray had vanished, a Chimango dashed down upon it. I jumped up and ran down as fast as I could, and found my white object to be a Penguin, apparently just killed by some accident out at sea, and in splendid plumage; but alas! in that moment the vile Chimango had stripped off and devoured the skin from its head, so that as a specimen it was hopelessly ruined.

As a rule, strong healthy birds despise the Chimango; they feed in his company; his sudden appearance causes no alarm, and they do not take the trouble to persecute him; but when they have eggs or young he is not to be trusted. He is not easily turned from a nest he has once discovered. I have seen him carry off a young Tyrant-bird (*Milvulus tyrannus*) in the face of such an attack from the parent birds that one would have imagined not even a true Hawk could have withstood.

Curiously enough, like one of the boldest of our small Hawks (*Tinnunculus cinnamominus*), they sometimes attack birds so much too strong and big for them that they must know the assault will produce more annoyance than harm. I was once watching a flock of Coots feeding on a grassy bank, when a passing Chimango paused in its flight, and, after hovering over them a few moments, dashed down upon them with such impetuosity that several birds were thrown to the ground by the quick successive blows of its wings. There they lay on their backs, kicking, apparently too much terrified to get up, while the Chimango deliberately eyed them for some moments, then quietly flew away, leaving them to dash into the water and cool their fright. Attacks like these are possibly made in a sportive spirit, for the Milvago is a playful bird, and, as with many other species, bird and mammal, its play always takes the form of attack.

Its inefficient weapons compel it to be more timid than the Hawk, but there are many exceptions, and in every locality individual birds are found distinguished by their temerity. Almost any shepherd can say that his flock is subject to the persecutions of at least one pair of lamb-killing birds of this species. They prowl about the flock, and watch till a small lamb is found sleeping at some distance from its dam, rush upon it, and, clinging to its head, eat away its nose and tongue. The shepherd is then obliged to kill the lamb; but I have seen many lambs that have been permitted to survive the

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mutilation, and which have grown to strong healthy sheep, though with greatly disfigured faces. One more instance I will give of the boldness of a bird of which Azara, greatly mistaken, says that it might possibly have courage enough to attack a mouse, though he doubts it. Close to my house, when I was a boy, a pair of these birds had their nest near a narrow path leading through a thicket of giant thistles, and every time I traversed this path the male bird, which, contrary to the rule with birds of prey, is larger and bolder than the female, would rise high above me, then dashing down strike my horse a violent blow on the forehead with its wings. This action it would repeat till I was out of the path. I thought it very strange the bird never struck *my* head ; but I presently discovered that it had an excellent reason for what it did. The gauchos ride by preference on horses never properly tamed, and one neighbour informed me that he was obliged every day to make a circuit of half a mile round the thistles, as the horses he rode became quite unmanageable in the path, they had been so terrified with the attacks of this *Ciimango*.

Where the intelligence of the bird appears to be really at fault is in its habit of attacking a sore-backed horse, tempted thereto by the sight of a raw spot, and apparently not understanding that the flesh it wishes to devour is an inseparable part of the whole animal. Darwin has noticed this curious blunder of the bird ; and I have often seen a chafed saddle-horse wildly scouring the plain closely

pursued by a hungry Chimango, determined to dine on a portion of him.

In the hot season, when marshes and lagoons are drying up, the Chimango is seen associating with Ibises and other waders, standing knee-deep in the water and watching for tadpoles, frogs, and other aquatic prey. He also wades after a very different kind of food. At the bottom of pools, collected on clayey soil after a summer shower, an edible fungus grows, of a dull greenish colour and resembling gelatine. He has found out that this fungus is good for food, though I never saw any other creature eating it. In cultivated districts he follows the plough in company with the Black-headed Gulls, *Molothri*, Guira Cuckoos, and Tyrant-birds, and clumsily gleans amongst the fresh-turned mould for worms and larvæ. He also attends the pigs when they are rooting on the plain to share any succulent treasure turned up by their snouts ; for he is not a bird that allows dignity to stand between him and his dinner. In the autumn, on damp, sultry days, the red ants, that make small conical mounds on the pampas, are everywhere seen swarming. Rising high in the air they form a little cloud or column, and hang suspended for hours over the same spot. On such days the Milvagos fare sumptuously on little insects, and under each cloud of winged ants several of them are to be seen in company with a few Flycatchers, or other diminutive species, briskly running about to pick up the falling manna, their enjoyment undisturbed by any sense of incongruity.

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Before everything, however, the Chimango is a vulture, and is to be found at every solitary rancho sharing with dogs and poultry the offal and waste meat thrown out on the dust-heap; or, after the flock has gone to pasture, tearing at the eyes and tongue of a dead lamb in the sheepfold. When the hide has been stripped from a dead horse or cow on the plains, the Chimango is always first on the scene. While feeding on a carcase it incessantly utters a soliloquy of the most lamentable notes, as if protesting against the hard necessity of having to put up with such carrion fare—long querulous cries resembling the piteous whines of a shivering puppy chained up in a bleak backyard and all its wants neglected, but infinitely more doleful in character. The gauchos have a saying comparing a man who grumbles at good fortune to the Chimango crying on a carcase—an extremely expressive saying to those who have listened to the distressful wailings of the bird over its meat. In winter a carcase attracts a great concourse of the Black-backed Gulls; for with the cold weather these Vultures of the sea abandon their breeding-places on the Atlantic shores to wander in search of food over the vast inland pampas. The dead beast is quickly surrounded by a host of them, and the poor Chimango crowded out. One at least, however, is usually to be seen perched on the carcase tearing at the flesh, and at intervals with outstretched neck and ruffled-up plumage uttering a succession of its strange wailing cries, reminding one of a public orator mounted on a

rostrum and addressing harrowing appeals to a crowd of attentive listeners. When the carcase has been finally abandoned by foxes, armadillos, Gulls, and Caranchos, the Chimango still clings sorrowfully to it, eking out a miserable existence by tearing at a fringe of gristle and whetting his hungry beak on the bones.

Though an inordinate lover of carrion, a wise instinct has taught it that this aliment is unsuited to the tender stomachs of its fledglings; these it feeds almost exclusively on the young of small birds. In November the Chimangos are seen incessantly beating over the cardoon bushes, after the manner of Hen-Harriers; for at this season in the cardoons breeds the *Synallaxis hudsoni*. This bird, sometimes called *Téru-réru del campo* by the natives, is excessively shy and mouse-like in habits, seldom showing itself, and by means of strong legs and a long, slender, wedge-like body is able to glide swiftly as a snake through and under the grass. In summer one hears its long, melancholy, trilling call-note from a cardoon bush, but if approached it drops to the ground and vanishes. Under the densest part of the cardoon bush it scoops out a little circular hollow in the soil, and constructs over it a dome of woven grass and thorns, leaving only a very small aperture; it lines the floor with dry horse-dung, and lays five buff-coloured eggs. So admirably is the nest concealed that I have searched every day for it through a whole breeding-season without being rewarded with a single find. Yet they are easily found by the Chi-

mango. In the course of a single day I have examined five or six broods of young Chimangos, and by pressing a finger on their distended crop made them disgorge their food, and found in every instance that they had been fed on nothing but the young of the Térú-reru. I was simply amazed at this wholesale destruction of the young of a species so secret in its nesting-habits; for no eye, even of a Hawk, can pierce through the leafage of a cardoon bush, ending near the surface in an accumulated mass of the dead and decaying portions of the plant. The explanation of the Chimango's success is to be found in the loquacious habit of the fledglings it preys on, a habit common in the young of Dendrocolaptine species. The intervals between the visits of the parent birds with food they spend in conversing together in their high-pitched tones. If a person approaches the solid fabric of the Oven-bird (*Furnarius rufus*) when there are young in it, he will hear shrill laughter-like notes and little choruses, like those uttered by the old birds, only feebler; but in the case of that species no harm can result from the loquacity of the young, since the castle they inhabit is impregnable. Hovering over the cardoons, the Chimango listens for the stridulous laughter of the fledglings, and when he hears it the thorny covering is quickly pierced and the dome broken into.

Facts like these bring before us with startling vividness the struggle for existence, showing what great issues in the life of a species may depend on matters so trivial, seemingly, that to the uninformed

mind they appear like the merest dust in the balance, which is not regarded. And how tremendous and pitiless is that searching law of the survival of the fittest in its operations, when we see a species like this *Synallaxis*, in the fashioning and perfecting of which Nature seems to have exhausted all her art, so exquisitely is it adapted in its structure, coloration, and habits to the one great object of concealment, yet apparently doomed to destruction through this one petty oversight—the irrepressible garrulity of the fledglings in their nest ! It is, however, no oversight at all ; since the law of natural selection is not prophetic in its action, and only preserves such variations as are beneficial in existing circumstances, without anticipating changes in the conditions. The settlement of the country has, no doubt, caused a great increase of Chimangos, and in some indirect way probably has served to quicken their intelligence ; thus a change in the conditions which have moulded this *Synallaxis* brings a danger to it from an unexpected quarter. The situation of the nest exposes it, one would imagine, to attacks from snakes and small mammals, from bird-killing spiders, beetles, and crickets, yet these subtle ground foes have missed it, while the baby-laughter of the little ones in their cradle has called down an unlooked-for destroyer from above. It might be answered that this must be a very numerous species, otherwise the Chimango could not have acquired the habit of finding the nests ; that when they become rarer the pursuit will be given over, after which the balance





CARANCHO CARRION-HAWK

Polyborus thurinus (Mol.)

will readjust itself. But in numbers there is safety, especially for a feeble, hunted species, unable from its peculiar structure to vary its manner of life. To such the remark made by Darwin, that "rarity is the precursor to extinction," applies with peculiar force.

CARANCHO OR CARACARA

Polyborus tharos

Dark brown w/ whitish mottlings; head black; wings and tail greyish white with greyish brown cross-bars and black tips; beneath dark brown; throat and sides of head yellowish white; beak yellow; cere orange. Sexes alike.

THIS bird, which combines the raptorial instincts of the Eagle with the base carrion-feeding habits of the Vulture, has already had so many biographers that it might seem superfluous to speak of it again at any great length; only it happens to be one of those very versatile species about which there is always something fresh to be said; and, beside I do not altogether agree with the very ignoble character usually ascribed to it by travellers. It is, however, probable that it varies greatly in disposition and habits in different districts. In Patagonia I was surprised at its dejected appearance and skulking cowardly manner, so unlike the bird I had been accustomed to see on the pampas. I shot several, and they were all in a miserably poor condition and apparently half-starved. It struck me that in that

cold, sterile country, where prey is scarce, the Carancho is altogether out of place ; for it there has to compete with Eagles and Vultures in large numbers ; and these, it is almost needless to say, are, in their separate lines, stronger than the composite and less specialised Carancho. In Patagonia he is truly a " miserable bird," with a very frail hold on existence. How different on that illimitable grassy ocean farther north, where he is the lord of the feathered race, for Eagles and Vultures, that require mountains and trees to breed and roost on, do not come there to set him aside ; there the conditions are suited to him and have served to develop in him a wonderfully bold and savage spirit. When seen perched on a conical ant-hill, standing erect above the tall plumy grass, he has a fine, even a noble appearance ; but when flying he is not handsome, the wings being very bluntly rounded at the extremities and the flight low and ungraceful. The plumage is blackish in the adult, brown in the young. The sides of the head and breast are creamy white, the latter transversely marked with black spots. The crown is adorned with a crest or top-knot. The beak is much larger than in Eagles and Vultures, and of a dull blue colour ; the cere and legs are bright yellow.

The species ranges throughout South America, and from Paraguay northwards is called everywhere, I believe, *Caracara*. South of Paraguay the Spanish name is *Carancho*, possibly a corruption of *Kéanché*, the Puelche name for the allied *Milvago chimango*, in imitation of its peevish cry. The

Indian name for the Carancho in these regions is *Trarú* (from its harsh cry), misspelt *Tharú* by Molina, a Spanish priest who wrote a book on the birds of Chili in the eighteenth century ; hence the specific name *tharus*.

The Caranchos pair for life, and may therefore be called social birds ; they also often live and hunt in families of the parent and young birds until the following spring ; and at all times several individuals will readily combine to attack their prey, but they never live or move about in flocks. Each couple has its own home or resting-place, which they will continue to use for an indefinite time, roosting on the same branch and occupying the same nest year after year ; while at all times the two birds are seen constantly together and seem very much attached. Azara relates that he once saw a male pounce down on a frog, and carrying it to a tree call his mate to him and make her a present of it. It was not a very magnificent present, but the action seems to show that the bird possesses some commendable qualities which are seldom seen in the raptorial family.

In uninhabited places I have always found the Caranchos just as abundant as in the settled districts ; and after a deer has been pulled down by the dogs I have seen as many as seventy or eighty birds congregate to feed on its flesh within half an hour, although not one had been previously visible. D'Orbigny describes the bird as a parasite on man, savage and civilised, following him everywhere to feed on the leavings when he slays wild or domestic

animals, and as being scarcely able to exist without him. No doubt the bird does follow man greatly to its advantage, but this is only in very thinly settled and purely pastoral and hunting districts, where a large proportion of the flesh of every animal slain is given to the fowls of the air. Where the population increases the Carancho quickly meets with the fate of all large species which are regarded as prejudicial.

Without doubt it is a carrion-eater, but only, I believe, when it cannot get fresh provisions; for when famished it will eat anything rather than study its dignity and suffer hunger like the nobler Eagle. I have frequently seen one or two or three of them together on the ground under a column of winged ants, eagerly feasting on the falling insects. To eat putrid meat it must be very hungry indeed; it is, however, amazingly fond of freshly-killed flesh, and when a cow is slaughtered at an estancia-house the Carancho quickly appears on the scene to claim his share, and catching up the first thing he can lift he carries it off before the dogs can deprive him of it. When he has risen to a height of five or six yards in the air he drops the meat from his beak and dexterously catches it in his claws without pausing or swerving in his flight. It is singular that the bird seems quite incapable of lifting anything from the ground with the claws, the beak being invariably used, even when the prey is an animal which it might seem dangerous to lift in this way. I once saw one of these birds swoop down on a rat

from a distance of about forty feet, and rise with its struggling and squealing prey to a height of twenty feet, then drop it from his beak and gracefully catch it in his talons. Yet when it pursues and overtakes a bird in the air it invariably uses the claws in the same way as other Hawks. This I have frequently observed, and I give the two following anecdotes to show that even birds which one would imagine to be quite safe from the Carancho are on some occasions attacked by it.

While walking in a fallow field near my home one day I came on a Pigeon feeding, and at once recognised it as one which had only begun to fly about a week before ; for although a large number of Pigeons were kept, this bird happened to be of the purest unspotted white, and for a long time I had been endeavouring to preserve and increase the pure white individuals, but with very little success, for the Peregrines invariably singled them out for attack. A Carancho was circling about at some distance overhead, and while I stood still to watch and admire my Pigeon it stooped to within twenty yards of the surface and remained hovering over my head. Presently the Pigeon became alarmed and flew away, whereupon the Hawk gave chase—a very vain chase I imagined it would prove. It lasted for about half a minute, the Pigeon rushing wildly round in wide circles, now mounting aloft and now plunging downwards close to the surface, the Carancho hotly following all the time. At length, evidently in great terror, the hunted bird flew down,

alighting within a yard of my feet. I stooped to take hold of it, when, becoming frightened at my action, it flew straight up and was seized in the talons of its pursuer close to my face and carried away.

In the next case the bird attacked was the Spur-winged Lapwing, the irreconcilable enemy of the Carancho and its bold and persistent persecutor. The very sight of this Hawk rouses the Lapwings to a frenzy of excitement, and springing aloft they hasten to meet it in mid-air, screaming loudly, and continue to harry it until it leaves their ground, after which they return, and, ranged in triplets, perform their triumphal dances, accompanied with loud drumming notes. But if their hated foe alights on the ground, or on some elevation near them, they hover about him, and first one, then another, rushes down with the greatest violence, and gliding near him turns the bend of its wings so that the spur appears almost to graze his head. While one bird is descending others are rising upwards to renew their charges; and this persecution continues until they drive him away or become exhausted with their fruitless efforts. The Carancho, however, takes little notice of his tormentors; only when the Plover comes very close, evidently bent on piercing his skull with its sharp weapon, he quickly dodges his head, after which he resumes his indifferent demeanour until the rush of the succeeding bird takes place.

While out riding one day a Carancho flew past me attended by about thirty Lapwings, combined to

hunt him from their ground, for it was near the breeding-season, when their jealous irascible temper is most excited. All at once, just as a Lapwing swept close by and then passed on before it, the Hawk quickened its flight in the most wonderful manner and was seen in hot pursuit of its tormentor. The angry hectoring cries of the Lapwings instantly changed to piercing screams of terror, which in a very short time brought a crowd numbering between two and three hundred birds to the rescue. Now, I thought, the hunted bird will escape, for it twisted and turned rapidly about, trying to lose itself amongst its fellows, all hovering in a compact crowd about it and screaming their loudest. But the Carancho was not to be shaken off ; he was never more than a yard behind his quarry, and I was near enough to distinguish the piteous screams of the chased Lapwing amidst all the tumult, as of a bird already captive. At the end of about a minute it was seized in the Carancho's talons, and, still violently screaming, borne away. The cloud of Lapwings followed for some distance, but presently they all returned to the fatal spot where the contest had taken place ; and for an hour afterwards they continued soaring about in separate bodies, screaming all the time with an unusual note in their voices as of fear or grief, and holding excited conclaves on the ground, to all appearance as greatly disturbed in their minds as an equal number of highly emotional human beings would be in the event of a similar disaster overtaking them.

It is not often, however, that the Carancho ventures singly to attack adult and vigorous birds, except the Tinamu, the "Partridge" of South America; they prey by preference on the young and ailing, on small lambs and pigs left at a distance by their dams; and they also frequently attack and kill old and weakly sheep. Where anything is wrong with bird or beast they are very quick to detect it, and will follow a sportsman to pick up the wounded birds, intelligently keeping at a safe distance themselves. I once shot a Flamingo in the grey stage of plumage and had some trouble to cross the stream, on the opposite side of which the bird, wounded very slightly, was rapidly stalking away. In three or four minutes I was over and found my Flamingo endeavouring to defend itself against the assaults of a Carancho which had marked it for its own, and was striking it on the neck and breast in the most vigorous and determined way, sometimes from above, at other times alighting on the ground before it and springing up to strike like a game-cock. A spot of blood on the plumage of the wounded bird, which had only one wing slightly damaged, had been sufficient to call down the attack; for to the Carancho a spot of blood, a drooping wing, or any irregularity in the gait, quickly tells its tale.

When several of these birds combine they are very bold. A friend told me that while voyaging on the Parana river a Black-necked Swan flew past him hotly pursued by three Caranchos; and I also witnessed an attack by four birds on a widely different

species. I was standing on the bank of a stream on the pampas watching a great concourse of birds of several kinds on the opposite shore, where the carcase of a horse, from which the hide had been stripped, lay at the edge of the water. One or two hundred Hooded Gulls and about a dozen Chimangos were gathered about the carcase, and close to them a very large flock of Glossy Ibises were wading about in the water, while amongst these, standing motionless in the water, was one solitary White Egret. Presently four Caranchos appeared, two adults and two young birds in brown plumage, and alighted on the ground near the carcase. The young birds advanced at once and began tearing at the flesh; while the two old birds stayed where they had alighted, as if disinclined to feed on half-putrid meat. Presently one of them sprang into the air and made a dash at the birds in the water, and instantly all the birds in the place rose into the air screaming loudly, the two young brown Caranchos only remaining on the ground. For a few moments I was in ignorance of the meaning of all this turmoil, when, suddenly, out of the confused black and white cloud of birds the Egret appeared, mounting vertically upwards with vigorous measured strokes. A moment later, first one then the other Carancho also emerged from the cloud, evidently pursuing the Egret, and only then the two brown birds sprang into the air and joined in the chase. For some minutes I watched the four birds toiling upwards with a wild zig-zag flight, while the Egret, still rising vertically, seemed to leave them

hopelessly far behind. But before long they reached and passed it, and each bird as he did so would turn and rush downwards, striking at the Egret with his claws, and while one descended the others were rising, bird following bird with the greatest regularity. In this way they continued toiling upwards until the Egret appeared a mere white speck in the sky, about which the four hateful black spots were still revolving. I had watched them from the first with the greatest excitement, and now began to fear that they would pass from sight and leave me in ignorance of the result; but at length they began to descend, and then it looked as if the Egret had lost all hope, for it was dropping very rapidly, while the four birds were all close to it, striking at it every three or four seconds. The descent for the last half of the distance was exceedingly rapid, and the birds would have come down almost at the very spot they started from, which was about forty yards from where I stood, but the Egret was driven aside, and sloping rapidly down struck the earth at a distance of two hundred yards from the starting-point. Scarcely had it touched the ground before the hungry quartet were tearing it with their beaks. They were all equally hungry no doubt, and perhaps the old birds were even hungrier than their young; and I am quite sure that if the flesh of the dead horse had not been so far advanced towards putrefaction they would not have attempted the conquest of the Egret.

I have so frequently seen a pure white bird singled out for attack in this way, that it has always been a

great subject of wonder to me how the two common species of snow-white Herons in South America are able to maintain their existence ; for their whiteness exceeds that of other white waterfowl, while, compared with Swans, Corms, and the Wood-Ibis, they are small and feeble. I am sure that if these four Caranchos had attacked a Glossy Ibis they would have found it an easier conquest ; yet they singled out the Egret, purely, I believe, on account of its shining white conspicuous plumage.

This wing-contest was a very splendid spectacle, and I was very glad that I had witnessed it, although it ended badly for the poor Egret ; but in another case of a combined attack by Caranchos there was nothing to admire except the intelligence displayed by the birds in combining, and much to cause the mind to revolt against the blindly destructive ferocity exhibited by Nature in the instincts of her creatures. The scene was witnessed by a beloved old gaucho friend of mine, a good observer, who related it to me. It was in summer, and he was riding in a narrow bridle-path on a plain covered with a dense growth of giant thistles, nine or ten feet high, when he noticed some distance ahead several Caranchos hovering over the spot ; and at once conjectured that some large animal had fallen there, or that a traveller had been thrown from his horse and was lying injured among the thistles. On reaching the spot he found an open space of ground about forty yards in diameter, surrounded by the dense wall of close-growing thistles, and over this place the birds

were flying, while several others were stationed near, apparently waiting for something to happen. The attraction was a large male Rhea squatting on the ground, and sheltering with its extended wings a brood of young birds. My friend was not able to count them, but there were not fewer than twenty-five or thirty young birds, small tender things, only a day or so out of the shell. As soon as he rode into the open space of ground, the old Ostrich sprang up, and with lowered head, clattering beak, and broad wings spread out like sails, rushed at him; his horse was greatly terrified, and tried to plunge into the dense mass of thistles, so that he had the greatest difficulty in keeping his seat. Presently the Ostrich left him, and casting his eyes round he was astonished to see that all the young Ostriches were running about, scattered over the ground, while the Caranchos were pursuing, knocking down, and killing them. Meanwhile the old Ostrich was frantically rushing about trying to save them; but the Caranchos, when driven from one bird they were attacking, would merely rise and drop on the next one a dozen yards off; and as there were about fifteen Caranchos all engaged in the same way, the slaughter was proceeding at a great rate. My friend, who had been vainly struggling to get the better of his horse, was then forced to leave the place, and did not therefore see the end of the tragedy in which he had acted an involuntary part; but before going he saw that at least half the young birds were dead, and that these were all torn and bleed-

ing on the small of the neck just behind the head, while in some cases the head had been completely wrenched off.

The Gauchos when snaring Partridges (*Tinamus*) frequently bribe the Caranchos to assist them. The snarer has a long slender cane with a small noose at the extremity, and when he sights a Partridge he gallops round it in circles until the bird crouches close in the grass; then the circles are narrowed and the pace slackened, while he extends the cane and lowers it gradually over the bewildered bird until the small noose is dropped over its head and it is caught. Many Partridges are not disposed to sit still to be taken in this open, bare-faced way; but if the snarer keeps a Carancho hovering about by throwing him an occasional gizzard, the wariest Partridge is so stricken with fear that it will sit still and allow itself to be caught.

In the love season the male Caranchos are frequently seen fighting; and sometimes, when the battle is carried on at a great height in the air, the combatants are seen clasped together and falling swiftly towards the earth; but, in all contests I have witnessed, the birds have not been so blinded with passion as to fall the whole distance before separating. Besides these single combats, in which unpaired or jealous males engage in the love-season, there are at all times occasional dissensions amongst them, the cause of which it would be difficult to determine. Here again, as often in hunting, the birds combine

to punish an offender, and in some cases the punishment is death.

Their cry is exceedingly loud and harsh, a short abrupt note, like *cruk*, repeated twice ; after which, if the bird is violently agitated, as when wounded or fighting, it throws its head backwards until the crown rests on the back, and rocks it from side to side, accompanying the action with a prolonged piercing cry of great power. This singular gesture of the Carancho, unique among birds, seems to express very forcibly a raging spirit.

The nest is built in a variety of situations : on trees, where there are any, but on the treeless pampas, where the Carancho is most at home, it is made on the ground, sometimes among the tall grass, while a very favourite site is a small islet or mound of earth rising well out of the water. When a suitable place has been found, the birds will continue to use the same nest for many consecutive years. It is a very large, slovenly structure of sticks, mixed with bones, pieces of skin, dry dung, and any portable object the bird may find to increase the bulk of his dwelling. The eggs are three or four, usually the last number, slightly oval, and varying greatly in colour and markings, some having irregular dark red blotches on a cream-coloured ground, while others are entirely of a deep brownish red, with a few black marks and blotches.

BLACK VULTURE

Cathartes atratus

Whole plumage black; head bare and black; length 25 inches, wing 17.5 inches.

THREE species of Vulture inhabit Argentina, all of the American family *Cathartidæ*; the first being the Great Condor, *Sarcophagrus gryphus*, found in the Andean region and in Patagonia. Of this grand often-described bird I can say next to nothing from personal observation, as I met with it but once, and that was on the sea-shore south of the Rio Negro. The second is the well-known Turkey Buzzard of southern North America, *Cathartes aura*. His range extends south to Patagonia, where I met with it and could always distinguish it from the common Black Vulture at a great distance by its bright red, bare head and neck. It is, however, far from common.

The Black Vulture, according to Dr. Burmeister, is found throughout the Argentine pampas, but is commoner in the east and north. It is known as the *Gallinazo* at Mendoza, and *Cuervo* (Crow) in Tucuman. Mr. Barrows tells us that he did not see it during his residence at Concepcion, but was told of its former abundance in times of drought, when dead sheep were numerous. It was, however, met with by him in small numbers during his excursion through the sierras of the pampas south of Buenos Ayres.

On the Rio Negro in Patagonia I found these

Vultures abundant, especially near the settlement of El Carmen, where, attracted by the refuse of the cattle-slaughtering establishments, they congregated in immense numbers, and were sometimes seen crowded together in thousands on the trees, where they roosted. Darwin observed them at the same place, and has described their soaring habits at considerable length.

The following account of the nesting habits of this species is given by Mr. John J. Dalgleish (*Proc. Roy. Phys. Soc. Edin.*, vi. 237) : "The eggs seldom, if ever, exceed two in number, and are usually laid in a hollow tree or on the ground. Their average weight is about a pound. They are slightly larger than those of the Turkey Buzzard, although the latter is a bigger bird. The ground colour is of a yellowish white, with blotches of dark reddish brown, and smaller markings of a lilac shade. These markings are generally more numerous at the larger end."

BRAZILIAN CORMORANT

Phalacrocorax brasiliensis

Black, glossed with metallic green; bill and naked skin of the face yellow; length 30 inches, wing 12 inches. Female similar; young brown, cheeks whitish and breast white.

THIS appears to be the only Cormorant met with on the coasts and inland waters of South America, north of Buenos Ayres; but two other species are found in southern Chili and Patagonia, which may

probably likewise occur in the southern provinces of the Republic.¹

Azara tells us that this Cormorant is not uncommon in Paraguay, and Mr. Barrows found it an "abundant resident" at Concepcion in Entrerios.

In the vicinity of Buenos Ayres several well-known authorities have met with it, and Durnford found it common and resident in Chupat.

The name of Brazilian Cormorant, which naturalists have bestowed on this species, is certainly inappropriate and misleading, since the bird is very abundant in La Plata, where the native name for it is *Vigua*; and it is also very common in the Patagonian rivers. It is always seen swimming, sinking its heavy body lower and lower down in the water when approached, until only the slanting snake-like head and neck are visible; or else sitting on the bank, or on a dead projecting branch, erect and with raised beak, and never moving from its statuesque attitude until forced to fly. It rises reluctantly and with great labour, and has a straight rapid flight, the wings beating incessantly. By day it is a silent bird, but when many individuals congregate to roost on the branches of a dead tree overhanging the river, they keep up a concert of deep, harsh, powerful notes all night long, which would cause any person not acquainted with their language to imagine that numerous pigs or peccaries were moving about with incessant gruntings in his neighbourhood.

¹ Namely, *P. imperialis* and *P. albiventris*. See Zool. Chall. (Birds), p. 121. It was probably one of these two species that Durnford found nesting on Tombo Point, south of Chupat (cf. *Ibis*, 1878, p. 399).

COCOI HERON

Ardea cocoi

Above grey; head, wings, and tail slatey black; beneath white; neck and sides striped with black; length 36 inches, wing 18 inches, tail 7 inches. Sexes alike.

THIS fine Heron is found throughout South and some parts of North America. In size, form, and colour it closely resembles the Common Heron of Europe; in flight, language, and feeding-habits the two species are identical, albeit inhabiting regions so widely separated. In the southern part of South America it is not seen associating with its fellows, nor does it breed in heronries; but this may be owing to the circumstance that in the temperate countries it is very thinly distributed; and it is highly probable, I think, that in the hotter regions, where it is more abundant, its habits may not appear so unsocial. Though they are always seen fishing singly, they pair for life, and male and female are never found far apart, but haunt the same stream or marsh all the year round. Azara says that in Paraguay, where they are rare, they go in pairs and breed in trees. On the pampas it makes its solitary nest amongst the rushes, and lays three blue eggs.

The following general remarks on the Heron apply chiefly to the *Ardea cocoi*, and to some extent also to other species of the Heron family.

I have observed Herons of several species a good

deal, but chiefly the Cocoi, and think there is something to be said in support of Buffon's opinion that they are wretched, indigent birds, condemned by the imperfection of their organs to a perpetual struggle with want and misery. In reality the organs, and the correlated instincts, are just as perfect as in any other creature, but the Heron is certainly more highly specialised and lives more in a groove than most species. Consequently when food fails him in the accustomed channels he suffers more than most other species.

Much as the different species vary in size, from the *Ardea cocoi* to the diminutive Variegated Heron of Azara (*Ardetta involucris*), no bigger than a Snipe, there is yet much sameness in their conformation, language, flight, nesting and other habits. They possess a snake-like head and neck, and a sharp taper beak, with which they transfix their prey as with a dart—also the serrate claw, about which so much has been said, and which has been regarded as an instance of pure adaptation.

A curious circumstance has come under my observation regarding Herons. Birds in poor condition are very much infested with vermin; whether the vermin are the cause or effect of the poor condition, I do not know; but such is the fact. Now in this region (the Argentine Republic) Herons are generally very poor, a good-conditioned bird being a very rare exception; a majority of individuals are much emaciated and infested with intestinal worms; yet I have never found a bird infested with lice, though the

Heron would seem a fit subject for them, and in the course of my rambles I have picked up many individuals apparently perishing from inanition. I do not wish to insinuate a belief that this immunity from vermin is due to the pectinated claw ; for though the bird does scratch and clean itself with the claw it could never rid the entire plumage from vermin by this organ, which is as ill adapted for such a purpose as for " giving a firmer hold on its slippery prey."

The Spoonbill has also the serration, and is, unlike the Heron, an active vigorous bird and usually fat ; yet it is much troubled with parasites, and I have found birds too weak to fly and literally swarming with them.

I merely wish to call the attention of ornithologists to the fact that in the region where I have observed Herons they are exempt in a remarkable degree from external parasites.

Much has also been said about certain patches of dense, clammy, yellowish down under the loose plumage of Herons. These curious appendages may be just as useless to the bird as the tuft of hair on its breast is to the Turkey-cock ; but there are more probabilities the other way, and it may yet be discovered that they are very necessary to its well-being. Perhaps these clammy feathers contain a secretion fatal to the vermin by which birds of sedentary habits are so much afflicted, and from which Herons appear to be so strangely free. They may even be the seat of that mysterious phosphorescent light which some one has affirmed emanates from the

Heron's breast when it fishes in the dark, and which serves to attract the fish, or to render them visible to the bird. Naturalists have, I believe, dismissed the subject of this light as a mere fable without any foundation of fact ; but real facts regarding habits of animals have not infrequently been so treated. Mr. Bartlett's interesting observations on the Flamingoes in the Society's Gardens show that the ancient story of the Pelican feeding its young on its own blood is perhaps only a slightly embellished account of a common habit of the Flamingo.

I have not observed Herons fishing by night very closely, but there is one fact which inclines me to believe it probable that some species might possess the light-emitting power in question. I am convinced that the *Ardea cocoi* sees as well by day as other diurnal species ; the streams on the level pampas are so muddy that a fish two inches below the surface is invisible to the human eye, yet in these thick waters the Herons fish by night and by day. If the eye is adapted to see well with the bright sun shining, how can it see at night and in such unfavourable circumstances without some such extraneous aid to vision as the attributed luminosity ?

Herons of all birds have the slowest flight ; but though incapable of progressing rapidly when flying horizontally, when pursued by a Hawk the Heron performs with marvellous ease and grace an aerial feat unequalled by any other bird, namely that of rising vertically to an amazing height in the air. The swift vertical flight with which the pursued

ascends until it becomes a mere speck in the blue zenith, the hurried zigzag flight of the pursuer, rising every minute above its prey, only to be left below again by a single flap of the Heron's wings, forms a sight of such grace, beauty, and power as to fill the mind of the spectator with delight and astonishment.

When the enemy comes to close quarters, the Heron instinctively throws itself belly up to repel the assault with its long, crooked, cutting claws. Raptorial species possess a similar habit; and the analogous correlation of habit and structure in genera so widely separated is very curious. The Falcon uses its feet to strike, lacerate, and grasp its prey; the Heron to anchor itself firmly to its perch; but for weapons of defence they are equally well adapted, and are employed in precisely the same manner. The Heron, with its great length of neck and legs, its lean unballasted body, large wings, and superabundance of plumage, is the least suited of birds to perch high; yet the structure of the feet renders it perfectly safe for the bird to do so. Thus the Heron is enabled to sit on a smooth enamelled rush or on the summit of a tree, and doze securely in a wind that, were its feet formed like those of other Waders, would blow it away like a bundle of dead feathers.

Another characteristic of Herons is that they carry the neck, when flying, folded in the form of the letter S. At other times the bird also carries the neck this way; and it is, indeed, in all long-necked species the figure the neck assumes when the bird reposes

or is in the act of watching something below it ; and the Heron's life is almost a perpetual watch. Apropos of this manner of carrying the neck, so natural to the bird, is it not the cause of the extreme wariness observable in Herons ? Herons are, I think, everywhere of a shy disposition ; with us they are the wildest of water-fowl, yet there is no reason for their being so, since they are never persecuted.

Birds ever fly reluctantly from danger ; and all species possessing the advantage of a long neck, such as the Swan, Flamingo, Stork, Spoonbill, etc., will continue with their necks stretched to their utmost capacity watching an intruder for an hour at a time rather than fly away. But in the Herons it must be only by a great effort that the neck can be wholly unbent ; for even if the neck cut out from a dead bird be forcibly straightened and then released, it flies back like a piece of india-rubber to its original shape. Therefore the effort to straighten the neck, invariably the first expression of alarm and curiosity, must be a painful one ; and to keep it for any length of time in that position is probably as insupportable to the bird as to keep the arm straightened vertically would be to a man. Thus the Heron flies at the first sight of an intruder, whilst the persecuted Duck, Swan, or other fowl continues motionless, watching with outstretched neck, participating in the alarm certainly, but not enduring actual physical pain.

Doubtless in many cases habits react upon and modify the structure of parts ; and in this instance the modified structure has in its turn apparently

reacted on and modified the habits. In seeking for and taking food, the body is required to perform certain definite motions and assume repeatedly the same attitudes ; this is most frequently the case in birds of aquatic habits. A readiness for assuming at all times, and an involuntary falling into, these peculiar attitudes and gestures appears to become hereditary ; and the species in which they are the most noticeable seem incapable of throwing the habit or manner off, even when placed in situations where it is useless or even detrimental. *Tringæ* rapidly peck and probe the mud as they advance ; Plovers peck and run, peck and run again. Now I have noticed scores of times that these birds cannot possibly lay aside this habit of pecking as they advance ; for even a wounded Plover running from his pursuer over dry barren ground goes through the form of eating by pausing for a moment every yard or so, pecking the ground, then running on again.

The Paraguay Snipe, and probably other true Snipes, possesses the singular habit of striking its beak on the ground when taking flight. In this instance has not the probing motion, performed instinctively as the bird moves, been utilised to assist it in rising ?

Grebes on land walk erect like Penguins and have a slow, awkward gait ; and whenever they wish to accelerate their progress they throw themselves forward on the breast and strike out the feet as in swimming.

The Glossy Ibis feeds in shallow water, thrusting

its great sickle beak into the weeds at the bottom at every step. When walking on land it observes these motions, and seems incapable of progressing without plunging its beak downwards into imaginary water at every stride.

The Spoonbill wades up to its knees and advances with beak always immersed, and swaying itself from side to side, so that at each lateral movement of the body the beak describes a great semicircle in the water; a flock of these birds feeding reminds one of a line of mowers mowing grass. On dry ground the Spoonbill seems unable to walk directly forward like other birds, but stoops, keeping the body in a horizontal position, and, turning from side to side, sweeps the air with its beak, as if still feeding in the water.

In the foregoing instances (and I could greatly multiply them) in which certain gestures and movements accompany progressive motion, it is difficult to see how the structure can be in any way modified by them; but the preying attitude of the heron, the waiting motionless in perpetual readiness to strike, has doubtless given the neck its peculiar form.

Two interesting traits of the Heron (and they have a necessary connection) are its tireless watchfulness and its insatiable voracity; for these characteristics have not, I think, been exaggerated even by the most sensational of ornithologists.

In birds of other genera repletion is invariably followed by a period of listless inactivity during which no food is taken or required. But the Heron

digests his food so rapidly that, however much he devours, he is always ready to gorge again; consequently he is not benefited so much by what he eats, and appears in the same state of semi-starvation when food is abundant as in times of scarcity. An old naturalist has suggested, as a reason for this, that the Heron, from its peculiar manner of taking its prey, requires fair weather to fish—that during spells of bad weather, when it is compelled to suffer the pangs of famine inactive, it contracts a meagre consumptive habit of body, which subsequent plenty cannot remove. A pretty theory, but it will not hold water; for in this region spells of bad weather are brief and infrequent; moreover, all other species that feed at the same table with the Heron, from the little flitting Kingfisher to the towering Flamingo, become excessively fat at certain seasons, and are at all times so healthy and vigorous that, compared with them, the Heron is the mere ghost of a bird. In no extraneous circumstances, but in the organisation of the bird itself, must be sought the cause of its anomalous condition; it does not appear to possess the fat-elaborating power, for at no season is any fat found on its dry, starved flesh; consequently there is no provision for a rainy day, and the misery of the bird (if it is miserable) consists in its perpetual, never-satisfied craving for food.

WHITE AND SNOWY EGRETS 101

WHITE EGRET AND SNOWY EGRET

Ardea egretta : A. candidissima

Entire plumage snow-white in both species. Length of White Egret 35 inches ; length of Snowy Egret 24 inches.

THESE two species are found in South, Central, and North America ; but the larger bird has a greater range, being found from Nova Scotia to Patagonia.

The small Snowy Egret abounds most in the hot and warm regions, and is quite common on the pampas but rare in Patagonia. It is more gregarious and social in its habits than the White Egret and is usually seen in flocks and associates with Ibises, Spoonbills, and other aquatic birds.

On the pampas, owing to the absence of forests, the nesting habits, like those of the Cocoi and other Herons, have been modified, for there it nests among the bulrushes and sedges. I take the following account of a herony on the pampas from a paper by Mr. Ernest Gibson. He was so fortunate as to find both species breeding together in considerable numbers.

" In November of 1873 I found a large breeding colony of *Ardea egretta*, *A. candidissima*, and *Nycticorax obscurus* in the heart of a lonely swamp. The rushes were thick, but had been broken down by the birds in a patch some fifty yards in diameter. There were from 300 to 400 nests, as well as I could judge ; of these three-fourths were of *A. egretta*, and the remainder, with the exception of two or three dozen of *N. obscurus*, belonged to *A. candidissima*.

Those of the first-mentioned species were slight platforms, placed on the tops of broken rushes, at a height of from two to three feet above the water, and barely a yard apart.

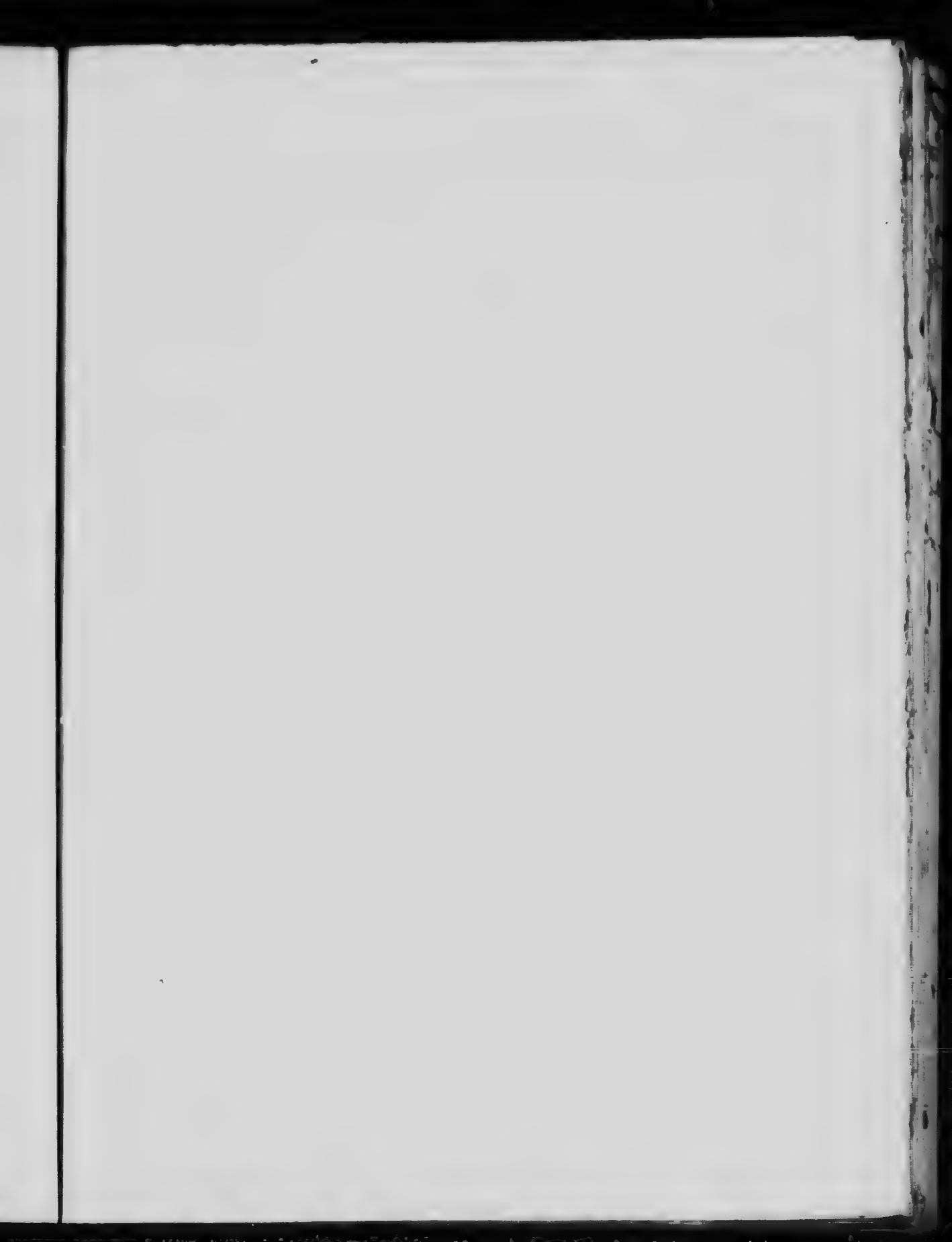
" The nests of *A. candidissima* were built up from the water to the height of a foot or a foot and a half, with a hollow on the top for the eggs; they were very compactly put together, of small dry twigs of a water-plant. A good many were distributed amongst those of *A. egretta*; but the majority were close together, at one side of the colony, where the reeds were taller and less broken.

" The nests of *N. obscurus* much resembled the latter in construction and material; but very few were interspersed amongst those of the other species, being retired to the side opposite *A. candidissima*, on the borders of some channels of clear water; there they were placed amongst the high reeds, and a few yards apart from each other.

" The larger Egrets remained standing on their nests till I was within twenty yards of them, and alighted again when I had passed. In this position they looked much larger than when flying. The smaller Egrets first flew up on to the reeds, and then immediately took to flight, not returning; while *N. obscurus* rose and sailed away, uttering a deep *squawk, squawk*, long before one came near the nest.

" At one side of the colony a nest of *Ciconia maguari*, with two full-grown young, seemed like the reigning house of the place.

" It certainly was one of the finest ornithological





WHISTLING HERON

Idea sibilatrix, Temm

sights I ever saw : all around a wilderness of dark green rushes, rising above my head as I sat on horseback ; the cloud of graceful snow-white birds perched everywhere, or reflected in the water as they flew to and fro overhead ; and the hundreds of blue eggs exposed to the bright sunlight.

" *A. c. elegans* and *A. candidissima* lay four eggs each, though the former rarely hatches out more than three. *N. obscurus* lays and hatches out three. The eggs of all three species are of the same shade of light blue."

WHISTLING HERON

Ardea sibilatrix

Above grey ; cap, crest, and wings greyish black ; a rufous patch behind the eye ; upper wing-coverts rufous ; beneath white, with yellowish tinge on breast ; beak reddish. Length 22 inches. Female similar.

THIS is a beautiful bird, with plumage as soft as down to the touch. Its colours are clear blue-grey and pale yellow, the under surface being nearly white. In some specimens that I have obtained the rump and tail-coverts had a pure primrose hue. There is a chestnut mark on the side of the head ; the eye is white, and the legs dark green in life.

Azara named this Heron *Flauta del Sol* (Flute of the Sun), a translation of the Indian term *Curahiremimbi*, derived from the popular belief that its whistling notes, which have a melodious and melancholy sound, prophesy changes in the weather.

It comes as far south as Buenos Ayres, but is only a summer visitor there, and very scarce. Having seen but little of it myself, I can only repeat Azara's words concerning it. He says it is common in Paraguay, going in pairs or families, and perches and roosts on trees, and when flying flaps its wings more rapidly than other Herons. It makes its nest on a tree, and lays two clear blue eggs.

I saw less of the Whistling or "Fluting" Heron than of any of the seven species I was acquainted with in La Plata. About its habits I found out nothing, and on that account I should have omitted all mention of it--that being the rule in this book--if its strange beauty had not charmed and made a lasting impression on my mind. The stuffed specimens, from which the description is taken, do not show the colours of the living bird--the soft clear grey and primrose yellow--most delicate colours and rarely seen in a bird of this size. In the museum specimens the primrose yellow fades to white with a dull yellowish tinge.

LITTLE BLUE HERON

Butorides cyanurus

Above blue grey; beneath ash-colour; black crest with greenish gloss; ferruginous spots on the neck; length 14 inches.

THE Little Blue Heron, though widely distributed, is not anywhere a common bird. I have always seen it singly, for it loves a hermit-life, and the

feeding-ground it prefers is a spot on the borders of a marshy stream shut in and overshadowed on all sides by trees and tall rushes. There the bird sits silent and solitary on a projecting root or dead branch ; or stands motionless and knee-deep in the water, intent on the small fry it feeds on. For whole months it will be found every day in the same place. When intruded on in its haunts it erects the feathers of its head and neck, looking strangely alarmed or angry, and flies away uttering a powerful, harsh, grating cry.

LITTLE RED HERON

Ardetta involucris

Above light fulvous, a black stripe on the nape ; front, stripe on back of the neck, bend of wing and outer secondaries, chestnut-red ; back striped with black ; wing-feathers ash-grey with red tips ; beneath yellowish white striped with brown ; beak yellow, feet green ; length 13, wing 5 inches.

THE . . . Red, or Variegated, Heron which inhabits Paraguay and Argentina, is the least of the family to which it belongs, its body being no bigger than that of the Common Snipe ; but in structure it is like other Herons, except that its legs are a trifle shorter in proportion to its size and its wings very much shorter than in other species. The under plumage is dull yellow in colour, while all the other parts are variegated with marks of fuscous and various shades of brown and yellow. The body is

extremely slim, and the lower portion of the neck covered with thick plumage, giving that part a deceptively massive appearance. The perching faculty, possessed in so eminent a degree by all Herons, probably attains its greatest perfection in this species, and is combined with locomotion in a unique and wonderful manner. It inhabits beds of rushes growing in rather deep water; very seldom, and probably only accidentally, does it visit the shore, and only when driven up does it rise above the rushes; for its flight, unlike that of its congeners, is extremely feeble. The rushes it lives amongst rise, smooth as polished pipe-stems, vertically from water too deep for the bird to wade in; yet it goes up to the summit and down to the surface, moving freely and briskly about amongst them, or runs in a straight line through them almost as rapidly as a Plover can run over the bare level ground. Unless I myself had been a witness of this feat I could scarcely have credited it; for how does it manage to grasp the smooth vertical stems quickly and firmly enough to progress so rapidly without ever slipping down through them?

The Variegated Heron is a silent, solitary bird, found everywhere in the marshes along the Plata, as also in the rush- and sedge-beds scattered over the pampas. It breeds amongst the rushes, and lays from three to five spherical eggs, of a rich lively green and beautiful beyond comparison. The nest is a slight platform structure about a foot above the water, and so small that there is barely space enough

on it for the eggs, which are large for the bird. When one looks down on them they cover and hide the slight nest, and being green like the surrounding rushes they are not easy to detect.

When driven up the bird flies eighty or a hundred yards away, and drops again amongst the rushes ; it is difficult to flush it a second time, and a third time it is impossible. A curious circumstance is that where it finally settles it can never be found. As I could never succeed in getting specimens when I wanted them, I once employed some gaucho boys, who had dogs trained to hunt flappers, to try for this little Heron. They procured several specimens, and said that without the aid of their dogs they could never succeed in finding a bird, though they always marked the exact spot where it alighted. This I attributed to the slender figure it makes, and to the colour of the plumage so closely assimilating to that of the dead yellow and brown-spotted rushes always found amongst the green ones ; but I did not know for many years that the bird possessed a marvellous instinct that made its peculiar conformation and imitative colour far more advantageous than they could be of themselves.

One day in November when out shooting, I noticed a Variegated Heron stealing off quickly through a bed of bulrushes, thirty or forty yards from me ; he was a foot or so above the ground, and went so rapidly that he appeared to glide through the rushes without touching them. I fired, but afterwards ascertained that in my hurry I had missed my aim.

The bird, however, disappeared at the report ; and thinking I had killed him I went to the spot.

It was a small, isolated bed of rushes I had seen him in ; the mud below and for some distance round was quite bare and hard, so that it would have been impossible for the bird to escape without being perceived ; and yet, dead or alive, he was not to be found. After vainly searching and re-searching through the rushes for a quarter of an hour I gave over the quest in great disgust and bewilderment, and, after reloading, was just turning to go, when behold ! there stood my Heron on a rush, no more than eight inches from, and on a level with, my knees. He was perched, the body erect, and the point of the tail touching the rush grasped by its feet ; the long slender tapering neck was held stiff, straight and vertically ; and the head and beak, instead of being carried obliquely, were also pointing up. There was not, from his feet to the tip of his beak, a perceptible curve or inequality, but the whole was the figure (the exact counterpart) of a straight tapering rush : the loose plumage arranged to fill inequalities, and the wings pressed into the hollow sides, made it impossible to see where the body ended and the neck began, or to distinguish head from neck or beak from head. This was, of course, a front view ; and the entire under surface of the bird was thus displayed, all of a uniform dull yellow, like that of a faded rush. I regarded the bird wonderingly for some time ; but not the least motion did it make. I thought it was wounded or paralysed with

fear, and, placing my hand on the point of its beak, forced the head down till it touched the back ; when I withdrew my hand up flew the head, like a steel spring, to its first position. I repeated the experiment many times with the same result, the very eyes of the bird appearing all the time rigid and unwinking like those of a creature in a fit. What wonder that it is so difficult, almost impossible, to discover the bird in such an attitude ! But how happened it that while repeatedly walking round the bird through the rushes I had not caught sight of the striped back and the broad dark-coloured sides ? I asked myself this question, and stepped round to get a side view, when, *mirabile dictu*, I could still see nothing but the rush-like front of the bird ! His motions on the perch, as he turned slowly or quickly round, still keeping the edge of the blade-like body before me, corresponded so exactly with my own that I almost doubted that I had moved at all. No sooner had I seen the finishing part of this marvellous instinct of self-preservation (this last act making the whole complete) than such a degree of delight and admiration possessed me as I have never before experienced during my researches, much as I have conversed with wild animals in the wilderness, and many and perfect as are the instances of adaptation I have witnessed. I could not finish admiring, and thought that never had anything so beautiful fallen in my way before ; for even the sublime cloud-seeking instinct of the White Egret and the typical Herons seemed less admirable than this ; and for some time I continued

experimenting, pressing down the bird's head and trying to bend him by main force into some other position ; but the strange rigidity remained unrelaxed, the fixed attitude unchanged. I also found, as I walked round him, that as soon as I got to the opposite side and he could no longer twist himself on his perch, he whirled his body with great rapidity the other way, instantly presenting the same front as before.

Finally I plucked him forcibly from the rush and perched him on my hand, upon which he flew away ; but he flew only fifty or sixty yards off, and dropped into the dry grass. Here he again put in practice the same instinct so ably that I groped about for ten or twelve minutes before refinding him, and was astonished that a creature to all appearance so weak and frail should have strength and endurance sufficient to keep its body rigid and in one attitude for so long a time.

Some recent or at all events later observations appear to show that some species of Bittern possess a similar instinct to that of the bird described—the faculty of effacing themselves as it were in the presence of an enemy. Doubtless any Bittern, its colouring being what it is, would make itself invisible among partially decayed and dead vegetation by extending and stiffening its body and keeping its breast towards its intruder. The peculiar thing in the case of the small Heron is that the whole action of the bird appears to be framed and designed expressly to make it look exactly like a dead yellow tapering bulrush.

LITTLE RED HERON

III

But what can one say of such an instinct—if we can call it an instinct? It is in its essence a weakness in the creature similar to that of many mammals, birds, fishes, batrachians, reptiles and insects that become paralysed with fear, or rather hypnotised, in the presence of an enemy. A strange flaw in the animal, once it brings to naught all the admirable instincts of self-preservation it has been endowed with, and gives it, without a struggle, a prey to its enemies, even to those of a slow, sluggish disposition.

In this particular instance the weakness or fault of nature has been taken advantage of by that principle which we call natural selection and has resulted in a more perfect protection than if the bird had been incapable of losing its mind, as one may say. In other words, the creature's liability to the hypnotic or cataleptic state on certain occasions is its best protection.

This, however, is not the only case in which a seemingly fatal weakness has been turned to good account, as we see in the death-like swoon, or "pretending to be dead," of many creatures when overcome by or in the presence of an enemy. I have observed it in the pampas fox and opossum, in the Tinamu, the Partridge of South America, in our Corncrake, and other Rails, and I have captured small birds by giving them a sudden fright.

By a strange chance I discovered that my Little Bittern was also subject to this weakness. A gaucho boy of my acquaintance, knowing that I was interested in this bird, one day brought me a dead specimen.

He said he had flushed it from a rush-bed, and as the bird flew away over dry land, he gave chase, and soon ran it down and captured it; but though perfectly uninjured it quickly died in his hand. As it was too late in the evening for me to deal with it I put it in a cage which had once been used to keep a Cardinal Finch in and hung it up under the veranda where it would be safe from cats. Next morning to my very great astonishment it was gone! A long-dead bird in a closed cage hung high up out of the way for safety, and now it was not there! How explain such a thing? There was no possible explanation, and it made me perfectly miserable for days thinking of it. Then at last it dawned on my weary brain that my dead bird had been alive all the time, that life had at all events come back to it, and that in squeezing its thin body edgeways through the wire it made its escape. Yet the wires were close enough to keep a Cardinal in confinement!

NIGHT-HERON

Nycticorax obscurus

Above ashy; front white; head, neck, and scapulars greenish black; long crest plumes white; beneath pale; length 26, wing 12 inches.

IN the Argentine Republic the Night-Heron lives in communities, and passes the hours of daylight perched inactive on large trees or in marshes on the rushes, and when disturbed by day they rise up with

heavy flappings and a loud *qua-quā* cry. At sunset they quit their retreat, to ascend a stream or seek some distant feeding-ground, and travel with a slow flight, bird succeeding bird at long intervals, and uttering their far-sounding, hoarse, barking night-cry.

Where the flock lives amongst the rushes, in places where there are no trees, the birds, by breaking down the rushes across each other, construct false nests or platforms to perch on. These platforms are placed close together, usually where the rushes are thickest, and serve the birds for an entire winter.

The breeding habits of the Night-Heron have been described in the account of an Egrets' herony.

MAGUARI STORK

Eucenura maguari

Plumage white; wings and upper tail-coverts black; naked lores and feet red; bill horn-colour; length 40, wing 20 inches.

THE Maguari Stork is a well-known bird on the pampas, breeding in the marshes, and also wading for its food in the shallow water; but it is not nearly so aquatic in its habits as the Jabirú, and after the breeding-season is over it is seen everywhere on the dry plains. Here these birds prey on mice, snakes and toads, but also frequently visit the cultivated fields in quest of food. When mice or frogs are exceptionally abundant on the pampas, the Storks

often appear in large numbers, and at such times I have seen them congregating by hundreds in the evening beside the water ; but in the daytime they scatter over the feeding-ground, where they are seen stalking along, intent on their prey, with majestic crane-like strides. To rise they give three long jumps before committing themselves to the air, and like all heavy fliers make a loud noise with their wings. They are never seen to alight on trees, like the Jabirú, and are absolutely dumb, unless the clattering they make with the bill when angry can be called a language.

The laying-time is about the middle of August, and the nest is built up amongst the rushes, rising about two feet above the surface of the water. The eggs are rather long, three or four in number, and of a chalky white.

Mr. Gibson, of Buenos Ayres, furnishes the following lively account of a young Maguari : " One, which I took on 5th October, was about the size of a domestic fowl, in down, and, with the exception of the white tail, entirely black. It soon became very tame, and used to wander all over the premises, looking for food, or watching any work that was going on. Rats were swallowed whole ; and the way it would gulp down a pound or two of raw meat would have horrified an English housekeeper. Snakes it seized by the nape of the neck, and passed them transversely through its bill by a succession of rapid and powerful nips, repeating the operation two or three times before being satisfied that life was totally

extinct. It used often to do the same thing with dry sticks (in order not to forget the way, I suppose); while on one occasion it swallowed a piece of hard cowhide, a foot long, and consequently could not bend its neck for twenty-four hours after—till the hide softened, in fact. The story also went that 'Byles the lawyer' (as he was called) mistook the tail of one of the pet lambs for a snake, and actually had it down his throat, but was 'brought up' by the body of the lamb! Byles inspired a wholesome respect in all the dogs and cats, but was very peaceable as a rule. One of our men had played some trick on him, however; and the result was that Byles generally went for him on every possible occasion, his long legs covering the ground like those of an Ostrich, while he produced a demoniacal row with his bill. It was amusing to see his victim dodging him all over the place, or sometimes, in desperation, turning on him with a stick; but Byles evaded every blow by jumping eight feet into the air, coming down on the other side of his enemy, and there repeating his war dance; while he always threatened (though his threats were never fulfilled) to make personal and pointed remarks with his formidable bill.

"Shortly after his capture feathers began to appear; and the following is a description of the bird at the age of about two months: Tail-feathers white, remainder of plumage glossy green-black; bill black; legs and feet grey. Spots and patches of white began to appear on head, back, and wings;

these gradually extended, until, by the end of May, the adult plumage was all acquired. Then my interest in Byles ceased, and latterly he strayed away to his native swamps."

WOOD-IBIS

Tantalus loculator

White ; greater wing-coverts and wing- and tail-feathers black with bronze reflections ; head and upper part of neck naked, dusky ; vertex covered with a horny place ; sides of head purplish ; feet slaty ; length 44, wing 17 inches. Female similar.

MOST people in the Plata region are familiar with this bird of the marshes, its lofty stork-like figure and white plumage making it a very conspicuous object.

On the pampas it is not uncommon in summer and autumn, and goes in flocks of a dozen or twenty. The birds are usually seen standing motionless in groups or scattered about in spiritless attitudes, apparently dozing away the time. On the wing it appears to better advantage, having a singularly calm, stately flight : on a warm, still day they are often seen soaring in circles far up in the sky.

I have never heard of this bird nesting on the pampas, and am inclined to think that it only breeds in forest regions, and visits the marshes in the treeless districts after the young have flown.

Its habits in North America, where it is called the "Wood-Ibis," are tolerably well known, and in

the ornithological works of that country it is described as "a hermit standing listless and alone on the topmost limb of some tall decayed cypress, its neck drawn in upon its shoulders, and its enormous bill resting like a scythe upon its breast."

It there nests on tall trees, sometimes in company with Egrets, and lays three white eggs.

There are three species of Stork in Argentina, the two described and the famous Jabirú, *Mycteria americana*.

This is a majestic bird, the largest of the American Storks; it stands five feet high, and the wings have a spread of nearly eight feet. The entire plumage is pure white, the head and six inches of the neck covered with a naked black skin; from the back part extend two scarlet bands, the skin being glossy and exceedingly loose, and runs narrowing down to the chest. When the bird is wounded or enraged this loose red skin is said to swell out like a bladder, changing to an intensely fiery scarlet hue. The name *Jabirú* is doubtless due to this circumstance, for Azara (who gives the Guarani name of the Stork as *Aiaiai*) says that the Indian word *Yabirú* signifies "blown out with the wind."

The *Jabirú* is but rarely found near Buenos Ayres, but occurs more frequently in Misiones, and in other districts on the northern frontier of the Republic. It nests on high trees, as has been recorded by Brown,¹ and is said to lay "blue-green" eggs.

¹ *Canoe and Camp-Life in British Guiana*, p. 272.

WHITE-FACED IBIS

Plegadis guarauna

Head, neck, and upper surface purplish chestnut, with a white band round the base of the bill; back with metallic reflections; wings and tail green with bronze reflections; band across wing-coverts chestnut; length 22, wing 9 inches.

THIS form of the well-known "Glossy Ibis" of Europe is one of our most abundant waterfowl on the pampas, and appears in spring in flocks; but as their movements are somewhat irregular and many individuals remain with us through the winter, their migrations probably do not extend very far. In summer they are found beside every marsh and watercourse, briskly wading about in the shallow water and plunging their long curved beaks downwards at every step. When taking wing they invariably utter a loud *ha ha ha*, resembling hearty human laughter, but somewhat nasal in sound. They frequently leave the marshy places and are seen scattered about the grassy plains, feeding like land-birds; and on the pampas they often congregate about the carcase of a dead horse or cow, to feed on the larvæ of the flesh-fly, in company with the Milvago and the Hooded Gull.

Their flight is singularly graceful; and during migration the flocks are seen to follow each other in rapid succession, each flock being usually composed of from fifty to a hundred individuals, sometimes of

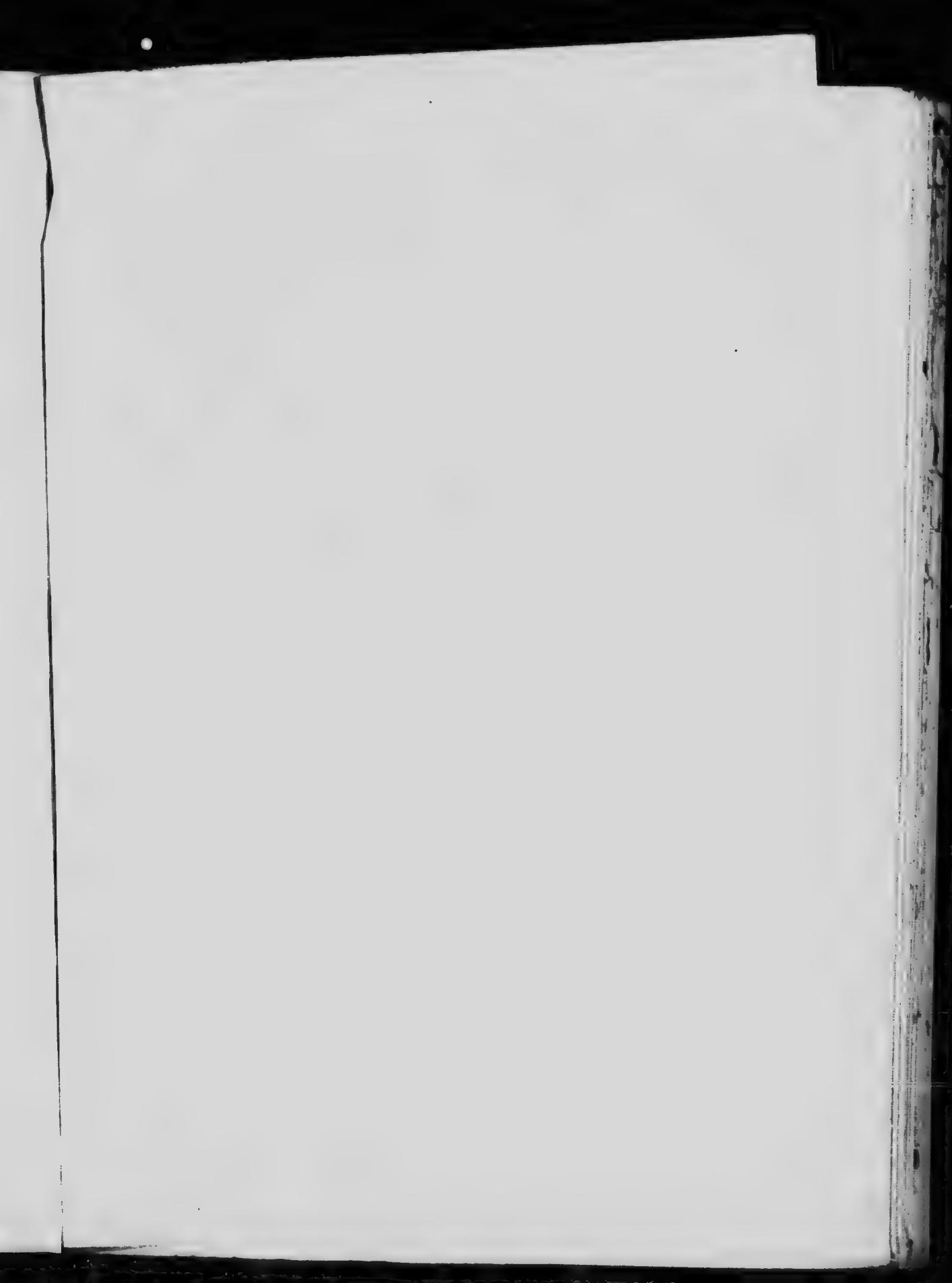
a much larger number. It is most interesting to watch them at such times, now soaring high in the air, displaying the deep chestnut hue of their breasts, then descending with a graceful curve towards the earth, as if to exhibit the dark metallic green and purple reflections of their upper plumage. The flock is meanwhile continually changing its form or disposition, as if at the signal of a leader. One moment it spreads out in a long straight line ; suddenly the birds scatter in disorder, or throw themselves together like a cloud of Starlings ; as suddenly they re-form to continue their journey in the figure of a phalanx, half-moon, or triangle. The fanciful notion can scarcely fail to suggest itself to the spectator that the birds go through these unnecessary evolutions intelligently in order to attain a greater proficiency in them by practice, or, perhaps, merely to make a display of their aerial accomplishments. The Glossy Ibis has another remarkable habit when on the wing. At times the flock appears as if suddenly seized with frenzy or panic, every bird rushing wildly away from its fellows, and descending with a violent zig-zag flight ; in a few moments the mad fit leaves them, they rise again, reassemble in the air, and resume their journey.

BLACK-FACED IBIS

Theristicus caudatus

Sides of throat and lores bare, skin black; top of head and lower part of neck in front reddish chestnut; neck white; back and wings grey with green reflections; tertials and outer webs of secondaries for two-thirds of their length white, remainder dark green; primaries dark green; rump light green, bronzed; tail dark bronze green; under parts black; length 33, wing 16.25 inches.

THIS very fine Ibis, called *Mandurria* & *Curucáu* by Azara and *Vandúria de invierno* (Winter Vanduria) in the vernacular, is one of the most interesting winter visitors from Patagonia to the pampas of Buenos Ayres. It is found in Chili, and has even been obtained as far north as Peru. On the east side of the continent it is most abundant (during the cold season) about latitude 37 deg. or 38 deg. Its summer home and breeding ground appears to be in the extreme south of the continent, its eggs having been obtained on the Straits of Magellan by Darwin, and later by Dr. Cunningham, who only says of it that it is a shy and wary bird, that goes in flocks of from four to eight, and has a cry resembling *qua-qua*, *qua-qua*. But he might just as well have spelt it *quack-quack*, since *qua-qua* fails to give the faintest idea of the series of hard, abrupt notes of extraordinary power the bird utters, usually when on the wing, which sound like blows of a powerful hammer on a metal plate. On the pampas this Ibis appears in May, frequents dry grassy situations, and goes in flocks of a dozen to forty or fifty individuals.





BLACK-FACED IBIS
Theristicus caudatus (Bodd.)

They walk rapidly, stooping very much, and probing the ground with their long, slender, curved beaks, and appear to subsist principally on the larvæ of the large horned beetle, with which their stomachs are usually found filled. So intent are they on seeking their food that the members of a flock often scatter in all directions and wander quite out of sight of each other; when this happens they occasionally utter loud vehement cries, as if to call their companions, or to inform each other of their whereabouts. Frequently one is seen to lift up its wings as if to fly, and, stretching them up vertically, to remain for fifteen or twenty seconds in this curious attitude. At sunset they all rise up clamouring and direct their flight to the nearest watercourse, and often on their way thither go through a strange and interesting performance. The flock suddenly precipitates itself downwards with a violence wonderful to see, each bird rushing this way and that as if striving to outvie its fellows in every wild fantastic motion of which they are capable. In this manner they rise and descend again and again, sometimes massed together, then scattering wide apart in all directions. This exercise they keep up for some time, and while it lasts they make the air resound for miles with their loud percussive screams.

In Patagonia I first observed this Ibis roosting on tall trees; and, according to Azara, it possesses the same habit in Paraguay. He says that all the flocks within a circuit of some leagues resort to one spot to sleep, and prefer tall dead trees, bordering

on the water, and if there is only one suitable tree all the birds crowd on to it, and in the morning scatter, each family or pair flying away to spend the day in its customary feeding-ground.

The egg obtained by Dr. Cunningham at Elizabeth Island is thus described by Prof. Newton (*Ibis*, 1870, p. 502) : "Dull surface of a pale greenish white with engrained blotches (mostly small) of neutral tint, and some few blotches, spots, and specks of dull deep brown; towards the larger end some hair-like streaks of a lighter shade of the same, and so far having an Ibidine or Plataleine character."

BLUE IBIS

Harpiprion cæruleiceps

White forehead joined to white bar above and behind the eye; top of head and crest dark brown, with greenish tinge; throat and neck covered with long narrow feathers, light brown with pinkish tinge in certain lights; upper parts bluish bronzy green; wings like the back, in some lights the feathers have a silvery gloss; primaries dark blue; tail dark green; under parts brownish grey, with pink reflections in some lights; length 33, wing 13.5 inches.

THIS noble Ibis ranges from Brazil, south of the Amazons, to the pampas of Buenos Ayres. It is a bird of the marshes, nowhere abundant, and yet is exceedingly well known to most people in the Argentine country: it would be difficult indeed to overlook a species possessing so peculiar and powerful a voice. In the vernacular it is called *Vandúria*, with

the addition of *aplomado*, or *barroso*, or *de las lagunas*, to distinguish it from the Winter Vanduria. The word is also frequently spelt *Mandúria* or *Bandúria*, but it does not come from *bandada* (flock), as Mr. Barrows imagines when he gives this vernacular name to the Glossy Ibis, but from the Spanish stringed instrument called *vandúria*. Possibly the instrument is obsolete now; not so the word, however, and it is sometimes used by the poets, instead of "harp" or "lyre" to symbolise poetic inspiration, especially in mock heroic compositions. Thus Iriarte:

Atención! que la vandúria ha templado.

If one could get a banjo with brass strings so big that it could be heard a mile and a half away, a dozen strokes dealt in swift succession on one string would produce a sound resembling the call of this Ibis—a voice of the desolate marshes, which competes in power with the outrageous human-like shrieks of the Ypecaha Rail, the long resounding wails of the Crazy Widow or Courlan, and the morning song of the Crested Screamer.

The Vanduria is usually seen sin ' in pairs, and sometimes, but rarely, in small companies of half a dozen birds. In its habits it is like a Tantalus, wading in the shallow water of the marshes, and devouring eels, frogs, fish, etc. After examining the well-filled stomachs of a few individuals one is strongly tempted to believe that the beautiful long beak of this Ibis has "forgotten its cunning" as a probe. At intervals in the daytime it utters, standing

on the ground, its resonant metallic cry. It is wary and has a strong, easy flight, and is a great wanderer, but I am not able to say whether it possesses a regular migration or not.

The celebrated naturalist Natterer procured specimens of this Ibis in the lagoons of Caicara, in the Brazilian province of Matogrosso, in September and November, 1825, but it is not mentioned by general writers on the birds of South-east Brazil.

WHISPERING IBIS

Phimosus infuscatus

Dark bronzy green, glossed with purple; fore-part and sides of head and neck naked, red; bill and feet red; length 24, wing 11.5 inches.

Of this Ibis, which ranges from Colombia to the Argentine Republic, a few individuals come as far south as the pampas of Buenos Ayres.

The unfeathered state of the fore part of the head and throat suggested to Azara the name of *Afeytado*, or "shaved," but about its habits he has nothing to say, nor does he mention its peculiar voice, or, perhaps it would be more correct to say, its want of voice; for it seems quite silent unless one comes near to it and listens very intently, when he will be able to hear little sigh-like puffs of sound as the bird flies away. It seems strange that this member of a loquacious loud-voiced family should be reduced to speak as it were in whispers!

On two or three occasions I have seen as many as half a dozen individuals together; at other times I have seen one or two associating with the Glossy Ibis.

Azara's name, "Shaved" Ibis, seems well enough in Spanish, just as his "Throat-cut" for a Starling with a scarlet throat does not strike one as at all shocking in that language; but for an English name I fancy that "Whispering Ibis," from the whisper-like sound the bird emits, would be more suitable, or at all events better sounding.

It is possible that two races of this Ibis exist on the South American continent; for in Brazil and further north it is said to have a loud cry, uttered when taking wing, as in the case of the Glossy Ibis; and one of its native names in the tropics—*curri-curri*—is said to be an imitation of its usual note.

ROSEATE SPOONBILL

"Iaja rosea"

Head bare; neck, back, and breast white; tail orange-buff with the shafts deep pink; rest of plumage pale rose-pink; lesser wing-coverts and upper tail-coverts intense carmine; neck with a tuft of twisted plumes, light carmine; head greenish, space round the eye and gular sac orange; eyes crimson, feet red; length 30, wing 15 inches. Female similar. Young with head completely feathered.

THE Roseate Spoonbill is found in both Americas and ranges south to the Straits of Magellan, but in Patagonia it is, I think, rare, for on the Rio Negro I

did not meet with it. On the pampas it is abundant, and I have been told that it breeds in the marshes there, but I have never been able to find a nest. It is usually seen in small flocks of from half a dozen to twenty individuals, which all feed near together, wading up to their knees and sweeping their long flat beaks from side to side as they advance. An English acquaintance of mine kept one of these birds as a pet on his estancia for seven years. It was very docile, and would spend the day roaming about the grounds, associating with the poultry, but invariably presented itself in the dining-room at meal-time, where it would take its station at one end of the table and dexterously catch in its beak any morsel thrown to it.

Formerly, when I wrote the bird biographies for *Argentine Ornithology* I believed that there were two species of Spoonbill in Argentina, but I found that I was alone among ornithologists in that belief. I can, therefore, only repeat here a part of what I wrote in that work, and leave the question for time to decide.

The general belief is that the pale-plumaged birds, with feathered heads and black eyes (the Roseate Spoonbill having crimson eyes), and without the bright wing-spots, the tuft on the breast, horny excrescences on the beak, and other marks, are only immature birds. Now, for one bird with all these characteristic marks of the true *Platalea ajaja*, which has a yellow tail, we meet on the pampas with not less than a hundred examples of the pale-plumaged

bird without any traces of such marks and with a rose-coloured tail ; and the disparity in number between mature and immature birds of one species could not well be so great as that. I have shot one immature specimen of the true Ajaja—so immature that it seemed not long out of the nest ; but the head was bare of feathers, and it had the knobs on the upper mandible, only they were so soft that they could be indented with the nail of the finger. Azara also mentions an immature bird which he obtained, but he does not say that the head was feathered ; and even this negative evidence goes a great way, since it would have been very unlike him to see a Spoonbill with a feathered head and otherwise unlike *Ajaja rosea*, and not describe it as a distinct species.

To conclude, I may mention that the pet bird my friend kept was of the pale-plumaged species, and never lost the feathers from its head, nor did it, in seven years, acquire any of the characteristic marks of *P. ajaja*.

ARGENTINE FLAMINGO

Phoenicopterus ignipalliatus

Plumage rosy red ; wing-coverts crimson ; wing-feathers black ; bill pale red, apical half black ; length 39, wing 15 inches. Female similar but smaller.

THE Argentine Flamingo inhabits the whole of the Argentine country, down to the Rio Negro in the south, where I found it very abundant. The residents told me of a breeding-place there—a shallow

salt-lake—which, however, had been abandoned by the birds before my visit. The nest there, as in other regions, was a small pillar of mud raised a foot or eighteen inches above the surface of the water, and with a slight hollow on the top ; and I was assured by people who had watched them on their nests that the incubating bird invariably sits with the hind part of the body projecting from the nest, and the long legs dangling down in the water, and not tucked up under the bird.

On the Rio Negro I found the birds most abundant in winter, which surprised me, for that there is a movement of Flamingoes to the north in the autumn I am quite sure, having often seen them passing overhead in a northerly direction in the migrating season. I have also found the young birds, in the grey plumage, at this season in the marshes near to Buenos Ayres city, hundreds of miles from any known breeding-place. Probably the birds in the interior of the country, where the cold is far more intense than on the sea-coast, go north before winter while those in the district bordering on the Atlantic have become stationary.

The Flamingo has a curious way of feeding : it immerses the beak, and by means of a rapid continuous movement of the mandibles passes a current of water through the mouth, where the minutest insects and particles of floating matter are arrested by the teeth. The stomach is small, and is usually found to contain a pulpy mass of greenish-coloured stuff, mixed with minute particles of quartz. Yet

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on so scanty a fare this large bird not only supports itself but becomes excessively fat. I spent half a winter in Patagonia at a house built on the borders of a small lake, and regularly every night a small flock of Flamingoes came to feed in the water about 200 yards from the back of the house. I used to open the window to listen to them, and the noise made by their beaks was continuous and resembled the sound produced by wringing out a wet cloth. They feed a great deal by day, but much more, I think, by night.

Where they are never persecuted they are tame birds, and when a flock is fired into and one bird killed, the other birds, though apparently much astonished do not fly away. They are silent birds, but not actually dumb, having a low, hoarse cry, uttered sometimes at the moment of taking flight; also another cry which I have only heard from a wounded bird, resembling the gobbling of a turkey-cock, only shriller. They are almost invariably seen standing in the water, even when not feeding, and even seem to sleep there; on land they have a very singular appearance, their immense height, in proportion to their bulk, giving them an appearance amongst birds something like that of the giraffe amongst mammals. To the lakes and water-courses in the midst of the grey scenery of Patagonia they seem to give a strange glory, while standing motionless, their tall rose-coloured forms mirrored in the dark water, but chiefly when they rise in a long crimson train or phalanx, flying low over the surface.

CRESTED SCREAMER

Chauna chavaria

Slatey grey, darker on the back; chin, neck, and cheeks whitish; a naked ring round the neck; nape crested; belly pale grey; feet red; length 32, wing 19 inches.

THIS majestic bird, called *Chaja* in the vernacular, is common throughout the Plata district, in marshes and on the open level country abounding in water and succulent grasses, and ranges south to the neighbourhood of Bahia Blanca. It is most abundant on the pampas south of Buenos Ayres city, and on that vast expanse of perfectly level green country the bird is seen at its best; it is there an important feature in the landscape; its vocal performances are doubly impressive on account of the profound silence of nature, and its singularity—the contrast between its aerial habit and ponderous structure—strikes one more forcibly where the view is so unobstructed and the atmosphere so pure.

The Crested Screamer, like most of the larger birds and mammals in every part of the globe to which European emigration is attracted, is probably doomed to rapid extermination. My observations of the bird, in that portion of the pampas where it is most abundant, date back some years, to a time when the inhabitants were few and mainly of Spanish race, never the destroyers of bird-life. The conditions had become extremely favourable to this species.

It is partially aquatic in its habits ; and in desert places is usually found in marshes, wading in the shallow water, and occasionally swimming to feed on the seeds and succulent leaves of water-loving plants. After the old giant grasses of the pampas had been eaten up by the cattle, and the sweet grasses of Europe had taken their place, the Screamers took kindly to that new food, preferring the clovers, and seemed as terrestrial in their feeding-habits as Upland Geese. Their food was abundant, and they were never persecuted by the natives. Their flesh is very dark, is coarse-grained but good to eat, with a flavour resembling that of Wild Duck, and there is a great deal of meat on a bird with a body larger than that of a Swan. Yet no person ever thought of killing or eating the Chaja ; and the birds were permitted to increase to a marvellous extent. It was a common thing a few years ago in the dry season to see them congregated in thousands ; and so little afraid of man were they that I have often ridden through large scattered flocks without making the birds take wing.

A curious thing about the Screamer is that it pairs for life, and yet is one of the most social of birds. But if a large flock is closely looked at, the birds are invariably seen methodically ranged in pairs. Another curious thing is that, notwithstanding the formidable weapons they possess (each wing being armed with two large spurs), they are extremely pacific in temper. I have never been able to detect even the slightest approach to a quarrel among them ; yet it is hard

to believe that they do not fight sometimes, since weapons of offence are usually found correlated with the disposition to use them. Captive birds, however, can be made to fight ; and I have known gauchos take them for the pleasure of witnessing their battles. They are very easily tamed, and in that state seem to show greater docility and intelligence than any of our domestic birds ; and become so attached to their home that it is quite safe to allow them to fly about at will. They associate, but do not quarrel, with the poultry. They are quick to distinguish strangers from the people of the house, showing considerable suspicion of them, and sometimes raising a loud alarm at a stranger's approach. Towards dogs and cats they are often unfriendly ; and when they are breeding it is dangerous for a strange person to approach the nest, as they will sometimes attack him with the greatest fury.

The Screamer is a very heavy bird, and rises from the ground laboriously, the wings, as in the case of the Swan, making a loud noise. Nevertheless it loves soaring, and will rise in an immense spiral until it wholly disappears from sight in the zenith, even in the brightest weather ; and considering its great bulk and dark colour, the height it ultimately attains must be very great. On sunny, windless days, especially in winter and spring, they often spend hours at a time in these sublime aerial exercises, slowly floating round and round in vast circles, and singing at intervals. How so heavy and comparatively short-winged a bird can sustain itself for such long periods

in the thin upper air to which it rises has not yet been explained.

The voice is very powerful. When disturbed, or when the nest is approached, both birds utter at intervals a loud alarm-cry, resembling in sound the anger-cry of the Peacock, but twice as loud. At other times its voice is exercised in a kind of singing performance, in which male and female join, and which produces the effect of harmony. The male begins, the female takes up her part, and then with marvellous strength and spirit they pour forth a torrent of strangely-contrasted sounds—some bassoon-like in their depth and volume, some like drum-beats, and others long, clear, and ringing. It is the loudest animal-sound of the pampas, and its jubilant, martial character strongly affects the mind in that silent, melancholy wilderness.

The Screamers sing all the year round, at all hours, both on the ground and when soaring; when in pairs the two birds invariably sing together, and when in flocks they sing in concert. At night they are heard about nine o'clock in the evening, and again just before dawn. It is not unusual, however, to hear them singing at other hours.

The nest is a large fabric placed among the low rushes and water-lilies, and is sometimes seen floating on the water, away from its moorings. The eggs are five, pointed at one end, pure white, and in size like the eggs of the domestic Goose. The young are clothed in yellow down like goslings, and follow the parents about from the date of hatching.

BARRED UPLAND GOOSE

Bernicla dispar

White; neck behind and body beneath banded with black; primaries, greater wing-coverts, tertaries, and scapulars cinereous; rump and tail-feathers ashy black; bill black, feet plumbeous; length 26, wing 16 inches. Female, head and neck cinnamon-brown; abdomen similar, barred with black; upper part also barred; rump and tail-feathers brownish black.

THIS bird is a northern form of the well-known "Upland Goose" of the Falkland Isles and Southern Patagonia, from which it differs in the male being completely barred across with black on the lower surface. It was first described by Philippi and Landbeck from Chilian specimens, and in 1872 was recognised by Dr. Burmeister as found near the Sierra Tandil and on the Rio Negro.

In April and May this Goose migrates northwards, along the eastern coast, as far as the pampas of Buenos Ayres, the migration ending about one hundred and fifty miles south of Buenos Ayres city. Further south they are at this season of the year excessively abundant in suitable localities. Their great camping-grounds are the valleys of the rivers Negro and Colorado, where they are often so numerous as to denude the low grounds of the tender winter clovers and grasses, and to cause serious loss to the sheep-breeders. They also visit the cultivated fields to devour the young wheat, and are intelligent enough to distinguish between a real human enemy and the ragged men of straw, miscalled scarecrows,

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set up by the farmers to frighten them. While committing their depredations they are exceedingly wary and difficult to shoot, but at night, when they congregate by the water-side, they give the sportsman a better chance. I have succeeded in killing as many as five at a shot by stalking them under cover of the darkness ; and a more deliciously-flavoured game-bird than this Goose I have never tasted.

They are social birds, always going in large flocks, and are very loquacious, the female having a deep honking note, while the male responds with a clear whistling, like the Sanderling's note etherealised.

ASHY-HEADED UPLAND GOOSE

Bernicla poliocephala

Head, neck, and scapulars leaden grey ; breast and upper back chestnut, banded with black ; abdomen, under wing-coverts, and bend of the wing white ; primaries black ; secondaries white ; greater wing-coverts black, edged with green and tipped with white ; lower back and tail black ; bill black, feet yellow ; length 24, wing 13.5 inches. Female similar.

THIS Patagonian Goose migrates northwards in winter, and appears on the Rio Negro and in the Buenos-Ayrean pampas in May, usually in small flocks, but sometimes as many as one or two hundred are seen together. The extreme limit of their winter migration appears to be about sixty miles south of Buenos Ayres city, on the plains near the river

Sanborombon ; probably they have before now been driven from this locality by the duck-shooters, but it was formerly their favourite rendezvous, where they collected in large numbers, though further north scarcely one was ever seen.

Durnford tells us that this Goose is resident on Lake Colguape in the territory of Chupat, and breeds there abundantly.

BLACK-NECKED SWAN

Cygnus nigricollis

White ; head and neck black ; postocular stripe and chin white ; lores naked ; bill plumbeous, cere red. Length 48, wing 17 inches. Female similar.

To my perhaps partial mind this species is pre-eminent for beauty among the Swans, although it is considerably smaller than the bird of the Old World, and does not, it must be admitted, comport itself so majestically. In questions of this kind it is natural for every one to be somewhat biassed in favour of the things of his own country ; but it will be readily admitted by all, I think, that the black-necked bird is one of three species greatly surpassing all others of this genus in beauty—the other two being, of course, the domesticated Swan of Europe and the Australian Black Swan (the most graceful of Swans).

This Swan is very abundant on the pampas of

Buenos Ayres and in Patagonia, and ranges south to the Magellan Straits and the Falklands. As a rule they are seen in small flocks, but sometimes as many as two or three hundred congregate together. They are heavy birds and rise with difficulty, and fly rapidly and with great violence, like all heavy-bodied short-winged species; but in no other very large bird with which I am acquainted do the wings produce so loud a rushing sound. In quiet places the beating of their wings can be heard distinctly when the birds are no longer in sight, although, owing to their large size, the eye can follow them very far. Gauchos sometimes capture them by suddenly charging down the wind upon them, uttering loud shouts which greatly terrify the birds, and when they attempt to rise with the wind they only flap along the ground and are easily knocked over. A gaucho of my acquaintance one day caught three out of a flock of six in this way; but a very strong wind favoured him, and the birds were at some distance from the water, and allowed him to come near before making the sudden charge.

According to Mr. Gibson, who has observed their breeding-habits, they begin to nest in July—just after the winter solstice. The nest is always placed among thick rushes growing in deep water, and the Swan invariably swims to and from her nest. It is built up from the bottom of the swamp, in some instances four or five feet deep, and rises a foot and a half above the surface. The top of the nest measures about two feet across, with a slight hollow

for the eggs, which are cream-coloured and have a smooth glossy shell. The number varies from three to five, and on one occasion six were found. Mr. Gibson has seen the parent bird swimming from the nest with the young on her back.

COSCOROBA SWAN

Coscoroba candida

White; tips of primaries black; bill coral red, feet red; length 40, wing 17.5 inches.

THIS Swan is considerably smaller than the black-necked species, and also inferior in beauty on account of its shorter neck. It is, nevertheless, a very handsome bird, being entirely of a pure white colour except the tips of the primaries, which are black. The beak and legs are bright rosy red. In its habits, language, and flight it also differs much from *Cygnus nigricollis*, and the country people call it *Ganso* (Goose), probably on account of its Goose-like habit of sometimes feeding away from the water, or because its flesh has the flavour of Wild Goose. Oddly enough, the scientific ornithologists are just beginning to find out that the common people were right in describing it as a Goose; at all events they are finding out that it has more Goose than Swan in its composition. As a rule they go in small parties of five or six individuals, but sometimes flocks num-

bering two or three hundred are seen in the cold season. Their migrations are very irregular, and sometimes they are excessively abundant in a district one year and absent from it the next. When disturbed they utter a loud musical trumpeting cry, in three notes, the last with a falling inflection; and their wings being much longer proportionately than in the black-necked species, they rise with greater ease and have a much freer and an almost soundless flight.

Concerning their breeding-habits Mr. Gibson observes that the nest is usually placed on the ground at some distance from the water. It is about a foot and a half high, made of mud and rushes; the hollow, which is rather deep, is lined with dry grass.

The eggs are eight or nine in number; smooth, white, and rounder than those of *Cygnus nigricollis*.

FULVOUS TREE-DUCK

Dendrocygna fulva

Chestnut-red, top of head darker, with black line down the nape; back black on the upper portion, banded with chestnut; wings and tail black; lesser wing-coverts dark chestnut; upper tail-coverts white; flanks chestnut, banded with black and white; bill and feet black; length 18, wing 8.5 inches.

THIS Duck, the well-known *Pato silvón* (Whistling Duck) of the eastern Argentine country, is found abundantly along the Plata and the great streams

flowing into it, and northwards to Paraguay. Along this great waterway it is to some extent a migratory species, appearing in spring in Buenos Ayres in very large numbers, to breed in the littoral marshes and also on the pampas. They migrate principally by night, and do not fly in long trains and phalanxes like other Ducks, but in a cloud; and when they migrate in spring and autumn the shrill confused clangour of their many voices is heard from the darkness overhead by dwellers in the Argentine capital; for the Ducks, following the eastern shore of the sea-like river, pass over that city on their journey. Northwards this Duck extends to Central Brazil; from the northern half of the southern continent and from Central America it is absent; but it reappears in Mexico. Commenting on these facts Messrs. Sclater and Salvin write: "Singular as this distribution is, it is still more remarkable when we consider that there appear to exist no tangible grounds for separating the American bird from that called *D. major* by Jerdon, which ranges throughout the peninsula of India and is also found in Madagascar!"

The Whistling Duck, in its chestnut and fulvous plumage, is a handsome bird and somewhat singular in appearance, especially when seen in a large body on the ground. When out of the water they crowd close together, and when disturbed stand up craning their necks, looking strangely tall on their long blue legs. While thus watching an intruder they are silent, and the sudden ringing chorus of whistling

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voices into which they burst at the moment of rising has a curious effect.

So extremely social are these Ducks that even when breeding they keep together in large flocks. The nest is made of stems and leaves, on the water among the reeds and aquatic plants; and sometimes large numbers of nests are found close together, as in a gallery. The eggs are pure white, and each bird lays, I believe, ten or twelve, but I am not sure about the exact number; and I have so frequently found from twenty to thirty eggs in a nest that I am convinced it is a not uncommon thing for two or three females to occupy one nest.

WHITE-FACED TREE-DUCK

Dendrocygna viduata

Face and spot on throat white; nape, neck in front, middle of abdomen, tail, rump, and wings black; hind neck chestnut; middle of back and scapulars brown, feathers with fulvous margins; wing-coverts olive-black; flanks banded with black and white; bill and feet black; length 17, wing 9 inches. Female similar.

THIS Tree-Duck resembles that last described in size, form, and maroon-red plumage, but is of a darker tint, and may also be easily distinguished, even at a long distance, by its white face contrasted with the velvety black of the head and neck. One of its vernacular names is *Pato viuda* (Widow Duck)

from its dark plumage relieved by white in front. Compared with *Dendrocygna fulva* it is a rare species, and goes always with its mate, but I have seen as many as half a dozen together. When taking wing it also whistles, but differently from the allied species, having three long clear whistling notes, not unlike the three-syllabled cry of the Sandpiper, only the notes are more prolonged. Of its breeding habits I know nothing.

BLUE-WINGED TEAL

Querquedula cyanoptera

Plumage red; crown black; lesser wing-coverts blue; wing speculum green, margined above with white; wing feathers black; bill black, eyes golden, feet orange; length 18; wing 7.6 inches. Female: blackish above, feathers margined with whitish; beneath dull white variegated with brown; throat white with black freckles.

THIS Teal has an exceedingly wide distribution in America, being found from California in the northern continent down to the Straits of Magellan and the Falkland Islands in the south. Its fine, strongly contrasted colours give it a very handsome appearance—the wings being clear grey-blue, the body deep maroon-red, the feet vivid yellow, beak black, and iris gold-colour. On the pampas it is common, and almost invariably seen in pairs at all seasons. Many of the Teals are quarrelsome in disposition; but

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this species, I think, exceeds them all in pugnacity, and when two pairs come together the males almost invariably begin fighting.

YELLOW-BILLED TEAL

Querquedula flavirostris

Above slatey brown ; head barred with narrow blackish bands ; middle of back rufescent, with centres of the feathers black and narrowly margined with ochraceous ; a broad wing speculum, black, margined with ochraceous above and below and a bronzy green blotch in the centre ; wing feathers slatey ; margins of secondaries pale rufous ; beneath whitish, spotted with black ; bill yellow, feet dark ; length 15, wing 7.5 inches. Female similar.

IN the southern part of the Argentine Republic this is one of the commonest species, and is almost invariably found in every marsh, stream, and pool of water on the pampas. It is resident, and usually goes in flocks of from a dozen to thirty individuals. It has a rapid flight, and is restless, lively, and extremely pugnacious in its habits. When a flock is on the water the birds are perpetually quarrelling. They are also highly inquisitive, and I have often shot them by first showing myself to the flock, and then standing or sitting still, when they would soon come wheeling about, flying in very close order. They quack and chatter in a variety of tones, and the male has also a clear, whistling note in the love-season.

The nest of this Duck is always made at a distance from the water, sometimes as far as one or two miles.

It consists of a slight hollow in the ground under a thistle-bush or tussock of long grass, and is lined with dry grass and a great deal of down, which is increased in quantity during incubation. The eggs are reddish cream-colour, and five is the usual number laid ; but I have also found nests with six and seven.

GREY TEAL

Querquedula versicolor

Above grey with narrow black cross-bands ; top of head blackish brown, sides of head and throat white ; beneath whitish, tinged with ochraceous and spotted with black on the breast ; wings greyish brown, speculum purplish green, margined with white above and below and a subterminal black band ; flanks barred with black and white ; bill black with an orange patch on each side at the base of the mandible ; feet dark ; length 16.5, wing 7.6 inches. Female similar but colours less bright.

THIS prettily variegated blue-grey Teal with its strongly-marked black and orange bill is perhaps the most abundant of the genus in the Argentine Republic, especially in the southern portion. It is resident, and unites in much larger flocks than any other bird of this group in the country. Its note when disturbed or flying is very peculiar, resembling in sound the muffled stridulating of the mole-cricket.

RING-NECKED TEAL

Querquedula torquata

Above dull brown ; head above and neck, expanding to a half collar, also lesser wing-coverts, lower back, and tail, black ; scapulars pure chestnut ; wings brownish black, with a large white patch on coverts of the bronze-green secondaries ; beneath, sides of head and throat dull white, streaked with brown ; breast tinged with rosy red, sparingly spotted with black ; belly and flanks white, narrowly barred with grey ; length 14, wing 7.2 inches. Female brown ; superciliaries, stripe on each side of head, throat, and sides of neck, white ; beneath white, banded with brown ; wings and tail black ; secondaries bronze-green ; a white patch as in the male.

THIS beautiful Duck, for our first knowledge of which we are indebted to Azara, is rather scarce in collections. Azara described the two somewhat dissimilar sexes under different names, the male being his *Pato collar negro*, and the female his *Pato ceja blanca*.

In the neighbourhood of Buenos Ayres the Ring-necked Teal is strictly migratory, and in the month of October appears in small flocks in the marshes along the river ; but in the interior of the country it is seldom met with. They are extremely active birds, constantly flying about from place to place both by day and night ; and in the love-season, when they alight in a pool of water, the males immediately engage in a spirited combat. While flying they utter a peculiar jarring sound, and occasionally a quacking note, rapidly repeated and sounding like a strange laugh ; but on the water, especially in the evening,

the male emits a long inflected note, plaintive and exquisitely pure in sound—a more melodious note it would be difficult to find even among the songsters.

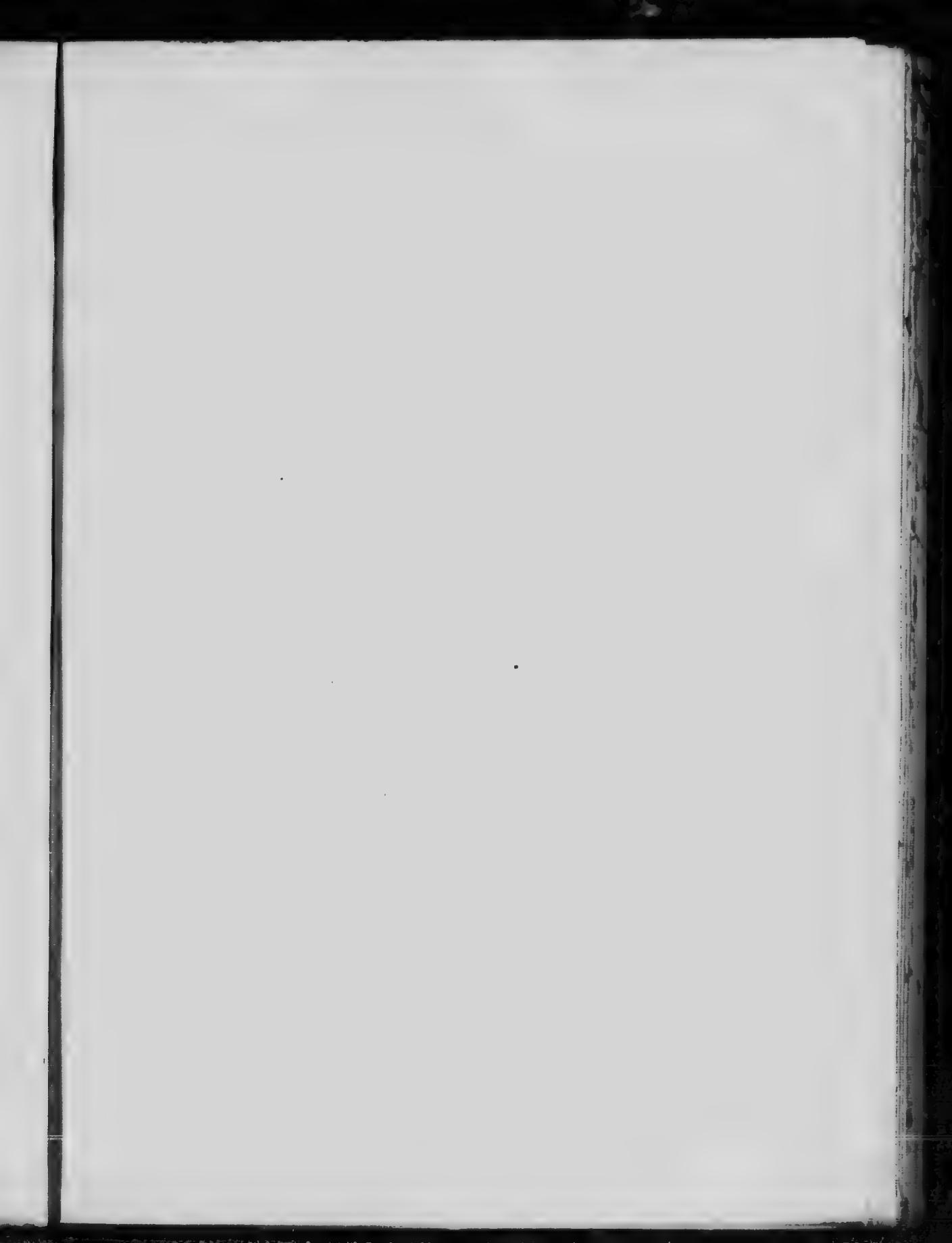
BRAZILIAN TEAL

Querquedula brasiliensis

Above brown; head more rufous; lower back, tail, and lesser wing-coverts black; wings brownish black; outer webs of inner primaries and the secondaries shining bronze-green; broad tips of outer secondaries white, divided from the green area by a black band; beneath paler, breast washed with rusty red; bill and feet orange; length 25.5, wing 7 inches.

THIS richly coloured Teal, which is widely extended in South America from Guiana down to the Straits of Magellan, is usually met with in pairs near Buenos Ayres, although as many as five or six are sometimes seen together. In habits it is a tree-Duck, preferring water-courses in the neighbourhood of woods, and is frequently seen perched on horizontal branches. The flight is slow and with the wings very much depressed, as in a Duck about to alight on the water; and the beautiful blue, green, and white speculum is thus rendered very conspicuous. The note of the male in the love-season is a long, plaintive whistle, singularly pure and sweet in sound, and heard usually in the evening.

It is a rather curious coincidence that the vernacular name of this Teal in La Plata should be *Pato Portugués*, which means, as things are understood in that region, Brazilian Duck.



BRAZILIAN TEAL.

Querquedula brasiliensis (Wm.)



BROWN PINTAIL

Dafila spinicauda

Above brown; feathers black in the centre and margined with brown; head above bright rufous spotted with black; wings brown, with a large speculum of bronzy black, distinctly margined above and below with buff; beneath, throat dirty white, sparingly spotted with black; breast, flanks, and crissum tinged with rufous, the feathers with black centres; belly white, in the lower portion slightly varied with brown; bill black, at the base yellow; feet plumbeous; length 19, wing 9.7 inches.

THE Brown Pintail is the commonest Duck in the Argentine Republic, and unites in the largest flocks. It is also, according to Philippi and Landbeck, the commonest species in Chili. It ranges from South Brazil and Peru to the Magellan Straits and the Falklands; but is probably most abundant in the Plata district and in North Patagonia. In the autumn it sometimes visits the pampas in immense numbers, to feed on the seed of the giant thistle (*Carduus mariana*); and on these occasions I have known as many as sixty killed at one shot. The birds, however, soon become wary when feeding on the open plains in large flocks, and it then becomes impossible to approach them without a trained horse. The Ducks pay no attention to horses and cattle browsing near them; and the trained animal, with the gunner concealing his gun and person behind it, feeds quietly along, and gradually approaches the flock until within range. In the valley of the Rio Negro, in Patagonia, the Pintails sometimes cause serious

damage to the farmers, coming up in clouds from the river by night to devour the ripe grain.

In favourable seasons the Pintail is a resident; but like the Marsh-Gulls, Pigeons, the American Golden Plover, and all birds that live and move in immense bodies, it travels often and far in search of food or water. A season of scarcity will quickly cause them to disappear from the pampas; and sometimes, after an absence of several months, a day's rain will end with the familiar sound of their cry and the sight of their long trains winging their way across the darkening heavens.

Their nest is made on the ground, under the grass or thistles, at a distance from the water, and is plentifully lined with down plucked from the bosom of the sitting bird. The eggs are seven or eight in number and of a deep cream-colour.

WHITE-FACED PINTAIL

Dafila bahamensis

Above reddish brown; feather centres blackish; tail and upper tail-coverts fawn; wings slatey black; broad speculum bronze-green, with fawn margin above and below; edging of external secondaries fawn; beneath brownish fawn, covered with concealed black spots; throat, cheeks, and front white; bill dark with a crimson patch at the base in each side; feet dark; length 18, wing 8.4 inches. Female similar.

SOMEONE in the eighteenth century picked up a dead Duck of an unknown species on the seashore in the Bahama Islands; it was then sent to a naturalist in

Europe who had the naming of all the creatures, and quite naturally he gave it the name of *Bahamensis*. And although we know that the duck does not inhabit the Bahamas, but is found throughout South America from British Guiana to Patagonia, and that it is one of the commonest Ducks in Brazil, there is a wise ornithological rule which forbids us, while the world endures, to call it anything but the Bahama Duck or Pintail. I was obliged to give it that name in *Argentine Ornithology*, but I think readers of this book in South America will henceforth prefer to call it by the name I have given it here. Doubtless there are other Pintail Ducks with white faces, but this has not given a name to any other species. The Brown Pintail is our most abundant species in Argentina, and I have noticed in flocks of great size, sometimes of many thousands, of that duck, that a single White-faced Duck in the flock could be detected at a long distance by means of that same snowy whiteness of the face.

On the Pampas and Patagonia it is not a common Duck and is almost invariably seen in pairs. I have, however, sometimes seen three or four together.

CHILOE WIGEON

Mareca sibilatrix

Above black, on the neck barred across with white; feathers of the back and scapularies margined with white; head above and cheeks pure white; nape and back of the neck shining greenish purple; wings brown, lesser wing-coverts white; secondaries velvety black, white at the base; beneath white, throat and fore-neck blackish; upper breast black, with narrow white cross-bands; flanks stained with rusty rufous; bill and feet black; length 20, wing 10.3 inches. Female similar, but not so bright in colour.

THE Chiloe Wigeon, as this duck has been usually called since its introduction and acclimatisation in England as an ornamental water-fowl, is the only species of the genus found in South America, and is most abundant on the pampas, where it is called by the country people *Pato picaso* or *Pato otero* (Piebald Duck) or *Chiriví* from its cry. It is a very handsome bird; the upper plumage variegated with black, white, and grey; forehead, speculum, and under surface white; head and neck dark glossy green. It is resident, and is usually seen in small flocks of from a dozen to twenty birds, but sometimes as many as one or two hundred congregate together. They are wary and loquacious, strong on the wing, and frequently engage in a peculiar kind of aerial pastime. A small flock will rise to a vast height, often until they seem mere specks in the sky, or disappear from sight altogether; and at that great altitude they continue hovering or flying, sometimes keeping very nearly in the same place for an hour

RED SHOVELLER

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or more, alternately separating and closing, and every time they close they slap each other on the wing so smartly that the sound may be heard distinctly even when the birds are no longer visible. While flying or swimming about they constantly utter their far-sounding cry—three or four long, clear, whistling notes, followed by another uttered with great emphasis and concluding with a kind of flourish.

The nest is made amongst the rushes in the marshes, and the eggs are pure white and eight or nine in number.

RED SHOVELLER

Spatula platalea

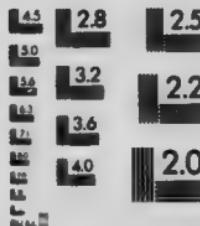
Above and beneath reddish, with round black spots; head and neck lighter and spots smaller, lower back blackish, barred with rufous, rump black; lesser coverts blue; middle coverts white; secondaries bronzy black; outer secondaries and scapulars with white shaft-stripes; crissum black; tail brown, lateral rectrices edged with white; bill dark, feet yellow; length 20 inches, wing 8 inches. Female, above blackish brown, edged with rufous; lesser wing-coverts bluish; beneath buffy rufous, varied and spotted with blackish except on the throat.

THERE is but one Shoveller Duck in South America, the present species, which is confined to the southern part of the continent, from Paraguay to Patagonia, and is familiar to sportsmen in the Plata as the Red Duck, or *Espátula*. It is seldom met with in flocks of more than twenty or thirty individuals, and a



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large number of birds appear to pair for life, as they are usually seen in pairs at all seasons of the year. In the autumn and winter months I have sometimes observed small flocks composed of males only, but these were perhaps young birds not yet paired. They feed in shallow water, where by plunging the head down they can reach the mud at the bottom; and when several are seen thus engaged, all with their heads and necks immersed, they look curiously like headless ducks floating on the water. When disturbed or flying the male emits a low sputtering sound, and this is its only language. They are resident, and the least wary of ducks; never engage, like other species, in real or mock combats; and their flight is rapid and violent, the wings beating quickly.

ROSY-BILLED DUCK

Metopiana peposaca

Above black, back of head and neck glossed with purple, back finely striated with white; speculum white; primaries greyish white; belly minutely vermiculated with white and grey; bill rosy red, enlarged at the base, feet yellow; length 19, wing 9.4 inches. Female: above brown, bend of wing, speculum, and belly white; bill and feet dull blue.

THE Rosy-billed Duck, usually called "Black Duck" in the Plata, inhabits the Argentine country from Paraguay to Patagonia, and also occurs in Uruguay and Chili, but does not extend to Brazil.

A peculiar interest attaches to this species owing to the fact that it is the only freshwater Duck in the sub-family Fuligulinæ, in which it is classed. With the exception of the Loggerhead Duck (*Tachyeres cinereus*), found in the Falklands and the Magellan Straits, all the other sea-Ducks of this division inhabit North and Central America; so that the Rosy-bill appears to have separated itself widely from its nearest relations geographically as well as in habits. In appearance it is a fine bird, the black plumage being frosted on the upper parts with white in a very delicate manner, while the rosy bill and large carmine caruncle and golden-red iris contrast beautifully with the glossy purple head and neck. The speculum is white, the legs bright yellow. The plumage of the female is brown.

In marshy places on the pampas the Rosy-billed Duck is very abundant, and they sometimes congregate in very large flocks. They obtain their food from floating weeds in the water, and are never seen, like the Pintails and other kinds, feeding on the dry land. They rise heavily, the wings being comparatively small, and have a rapid, straight, violent flight; they are nevertheless able to perform long journeys, and travel in long lines and at a considerable elevation. Their only language is a deep, hoarse, prolonged, raven-like note, uttered by the male in the love-season. The nest is made on swampy ground near the water, of dry rushes, and is, for a Duck, a deep well-made structure; the eggs are oval in form, cream-coloured, and twelve in number.

Besides the twelve species described there are five more Ducks in Argentina, namely :—the Crested Duck, *Sarcidiornis carunculata*; Muscovy Duck, *Cairina moschata*; Black-headed Duck, *Heteronetta melancephala*; Rusty Lake Duck, *Erismatura ferruginea*; and White-winged Lake Duck, *Nomonyx dominicus*.

All these species I knew, with the exception of the Crested Duck; but they were rare in my district and I could learn nothing of their habits from my own observation.

ARGENTINE WOOD-PIGEON

Columba picazuro

Above pale brown; head and neck vinous; back of neck with white cross-bands which are edged with black; lower back and tail plumbeous; wings plumbeous, larger coverts broadly edged with white; beneath pale vinaceous; flanks and crissum plumbeous; length 14 inches, wing 8 inches. Female similar.

THIS bird so closely resembles the European Wood-Pigeon in its appearance, habits, and language that I prefer in this book to drop the name of Picazuro Pigeon used in the former work (*Argentine Ornithology*) and call it the Argentine Wood-Pigeon. The chief differences are the absence of the white collar and the strangely human-like sound of its notes.

In summer they inhabit woods, and are seen in pairs or small parties, but in winter unite in flocks of

from twenty to one or two hundred individuals, and roam much over the open country. It is a wary bird, and when feeding walks on the ground in a slow, somewhat stately manner. In spring its song resounds in the woods, and, when heard for the first time, fills the listener with wonder, so human-like in tone are its long, mournful notes. The notes are five, the last one prolonged, with a falling inflection, and profoundly sorrowful. The nest is a platform structure, frequently placed on a broad horizontal branch ; the eggs are two, and closely resemble those of the common Rock-Dove of Europe.

SPOTTED WOOD-PIGEON

Columba maculosa

Above pale vinaceous brown profusely spotted on the back and wings with white apical spots; lower back and tail plumbeous; wings and tail slatey black, the former with narrow whitish margins; beneath plumbeous, with a strong vinaceous tinge; bill black, feet yellow; length 13, wing 8.5 inches. Female similar.

THIS Pigeon has a general resemblance to the Pica-zuro, but may be at once distinguished by its spotted back and wings. It ranges from South Peru through Bolivia and Western Argentina into Patagonia, where it appears to be a resident. In winter the valley of the Rio Negro is visited by it in immense flocks, which are a great plague to the farmers, as they descend in clouds on the fields and devour the wheat

before it has time to sprout. While watching crowds of these birds feeding on the ground, I noticed that their manner was in striking contrast to that of the *C. picazuro*, which has slow and dignified motions; for it hurried about, and snatched up its food with such rapidity that the most animated motions of other birds that feed in flocks on the ground seemed languid in comparison. This excessively lively habit is, no doubt, directly caused by the conditions of life; the sterile soil and scanty vegetation of the region it inhabits require in a species going in large bodies, and subsisting exclusively on fallen seed, a greater activity than is necessary in the rich fertile region further north.

Its song is composed of notes equal in length and number to that of the Picazuro, but its voice is always hoarse, like that of the European Wood-Pigeon, when his early spring song has a low, throaty sound, as if the bird was still suffering from the effects of a winter cold.

The great body of these birds retire on the approach of summer from the Rio Negro valley, a few only remaining to breed. Their nesting-habits and eggs are like those of the Picazuro.

SPOTTED DOVE

Zenaida maculata

Above pale brown; nape plumbeous; outer wing-coverts and scapularies with a few black spots; wings dark grey, with fine white margins; tail plumbeous, broadly ended with white, and crossed by a subapical black band; middle rectrices like the back; beneath pale vinaceous, brighter on the breast, and whiter on the throat; bill black, feet yellow; length 9, wing 3.5 inches. Female similar.

THIS is the commonest species of the Pigeon tribe in the Argentine country, and is known to everyone as the *Torcasa*, probably a corruption of *Tórtola* (Turtle-Dove). In autumn they often congregate in very large flocks, and are sometimes observed migrating, flock succeeding flock, all travelling in a northerly direction, and continuing to pass for several consecutive days. But these autumnal migrations are not witnessed every year, nor have I seen any return migration in spring; while the usual autumn and winter movements are very irregular, and apparently depend altogether on the supply of food. When the giant thistle has covered the plains in summer incredible numbers of *Torcasas* appear later in the season, and usually spend the winter on the plains, congregating every evening in countless myriads wherever there are trees enough to afford a suitable roosting-place.

On bright warm days in August, the sweet and sorrowful sob-like song of this Dove, composed of five notes, is heard from every grove—a pleasing, soft, murmuring sound, which causes one to experience by anticipation the languid summer feeling in his veins.

The nest, as in other Pigeons, is a simple platform of slender sticks ; the eggs are oval, white, and two in number. The birds appear to breed by preference near a human habitation, and do so probably for the sake of the protection afforded them ; for the Chimango and other birds of prey destroy their eggs and young to a large extent.

One summer a Torcasa laid an egg in the nest of one of my Pigeons, built on the large horizontal branch of a tree at some distance from the dove-cote. The egg was hatched, and the young bird reared by its foster-parents ; and when able to fly it took up its abode along with the other Pigeons. The following spring it began to separate itself from its companions, and would fly to the porch, and sit there cooing by the hour every day. At length it went away to the plantation, having, I believe, found a mate, and we saw no more of it.

PIGMY DOVE

Columba picui

Above brownish ash-colour ; head and neck dove grey ; wing feathers black ; coverts and secondaries like the back, white on their outer edges, a band of bright blue across the tips of the lesser coverts ; tail white, except the two central feathers, which are like the back ; beneath pale vinaceous ; throat white ; under wing-coverts black ; bill dark, feet yellow ; length 6.5, wing 3.5 inches. Female similar but duller.

THIS species, the smallest of our Doves, is common everywhere in the Plata district, where it is called *Tortolita* (Little Turtle-Dove), Azara's name *Picui* not being known to our countrymen.

It is usually seen with its mate, for many individuals seem to pair for life; but sometimes a dozen or twenty individuals unite in one flock. It is resident, comes a great deal about houses, and is familiar with man, and lively in its habits. It sings a great deal in summer and even on warm days in winter; but its tones are wanting in the wild pathos which gives a charm to the melody of some of our larger species, the song consisting of a succession of long, rather loud, and somewhat monotonous notes, pleasant to hear, like most bird-music, but nothing more.

The nest is the usual slight structure of sticks; the eggs two, oval, and white. They breed twice, and sometimes three times, in one season, the last brood being hatched as late as April or even May.

SOLITARY PIGEON

Engyptila chalcauchensis

Above greyish brown, head and nape plumbeous; back of neck with the feathers edged with iridescent bronzy green; tail blackish, broadly tipped with white; central rectrices like the back; beneath pale vinaceous; middle of throat, belly, and crissum white; under surface of wings bright chestnut; bill black, feet yellowish; length 10, wing 5.7 inches. Female similar.

THIS Dove, which is a southern form of a widely distributed group of species of the genus *Engyptila*, formerly called *Leptoptila*, inhabits the woods of the Plata district, and never, like other Pigeons, seeks the open country to feed. It is solitary, although, where many birds live in close proximity, three or

four may be sometimes seen in company. It spends a great deal of time on the ground, where it walks about under the trees rather briskly, searching for seeds and berries. Their song is a single uninflected and rather musical note, which the bird repeats at short intervals, especially in the evening during the warm season. Where the birds are abundant the wood, just before sunset, becomes vocal with their curious far-sounding notes; and as this evening song is heard as long as the genial weather lasts, it is probably not related to the sexual instinct. The nest is a simple platform; the eggs are two, and white, but more sp. :rical in shape than those of most other Pigeons.

Besides the five Pigeons I have described there are three more species in Argentina, confined to the northern part of the country. South America is rich in Pigeons, the species numbering sixty or seventy.

BLACK RAIL

Rallus rhytirhynchus

Above greenish brown; beneath plumbeous; bill incurved, greenish, w h a blood-red basal spot; feet red; length 12, wing 5.4 inches. Female similar.

THIS Rail differs from the other species in its beak, which is very long and curved, as in the Painted Snipe (*Hynchæa*), and has three strongly contrasted colours—dark green, bright blue, and scarlet at the

base. The blue and red tints become very vivid in the love-season. Without being anywhere abundant, the Black Rail is found throughout the Plata region in every place where reeds and rusher grow. In the marshes along the Plata they are met with quite as frequently in winter as in summer ; this fact surprised me greatly, since I know this species to be migratory, their unmistakable cries being heard overhead every night in spring and autumn, when they are performing their distant journeys. Probably all the birds frequenting the inland marshes on the south-western pampas migrate north in winter, and all those inhabiting the Plata marshes and the Atlantic sea-board, where there is abundant shelter and a higher temperature, remain all the year. On the Rio Negro of Patagonia I found the Black Rail a resident, but the winter of that district is singularly mild ; moreover, the wide expanse of waterless country lying between the Rio Negro and the moist pampas region would make an annual migration from the former places difficult to such a feeble flier. Of this instinct we know at least that it is hereditary ; and it becomes hard to believe that from every one of the reed-beds distributed over the vast country inhabited by this species a little contingent of migrants is drawn away annually to winter elsewhere, leaving a larger number behind. Such a difference of habit cannot exist among individuals of a species in one locality ; but differences in the migratory as in other instincts, great as this, are found in *races* inhabiting isolated or widely separated districts.

It is difficult to flush the Black Rail; it rises in a weak fluttering manner, the legs dangling down, and after flying thirty or forty yards drops again into the reeds. Its language is curious: when alarmed the bird repeats, at short intervals, a note almost painful from its excessive sharpness, and utters it standing on a low branch or other elevation, but well masked by reeds and bushes, and incessantly bobbing its head, jerking its tail, and briskly turning from side to side. It has at such times a very interesting appearance, while the long beak, brilliant with the nupri^{al} colouring, the bright red eye and vermillion legs, admirably contrasting with the fine deep slate plumage, give it considerable claims to beauty. At other times it has a hollow call-note with a puzzling ventriloquism in the sound, which is sometimes repeated at short intervals for an hour. While uttering it the bird stands as usual on a slight eminence, but drawn up in a listless attitude and without any of its nods and jerks and other frisky gestures. It has also a kind of song, which sounds not unlike the braying of a donkey; hence the vernacular name *Burrito* (Little Ass) by which the bird is known in the Plata. This song is heard both day and night, and is a confused performance, uttered without pause, and composed of several long shrill notes, modulated and mingled with others hollow and booming. These notes can be heard a thousand yards away; but, far or near, they always sound remote.

YPECAHA RAIL

Aramides ypecaha

Above olive-green; neck red; front cinereous; rump and tail black; beneath, throat white, breast and neck nervous; abdomen rosy red, lower belly and thighs grey; flanks and crissum black; under wing-coverts rufous, with black cross-bars; bill yellow, feet red; length 19, wing 8.5 inches. Female similar.

YPECAHA is the Guarani name, preserved by Azara, of this highly interesting species; by the Spanish it is called *Gallineta*, from its supposed resemblance to a fowl. Without any brilliant tints, there is yet something so pleasing to the eye in the various hues of its plumage—light brown and drab colour, grey, buff, and black—all these colours so harmoniously disposed, the effect heightened by the long, straight yellow beak, golden-red eye, and vermillion legs, that I do not know a handsomer water-fowl.

These Rails are found as far south as the thirty-fifth parallel of latitude, and are abundant along the marshy borders of the Plata, frequenting the wet reed-beds and forests of water-loving *Erythrina cristagalli*. Where they are never persecuted they are bold, pugnacious birds, coming out of the reeds by day and attacking the domestic poultry about the houses and even in the streets of the villages situated on the borders of their marshy haunts. But when they are compelled to place man on the list of their enemies, it is a difficult matter to get a sight of one; for, like

all birds that rise laboriously, they are vigilant to excess, and keep themselves so well concealed that the sportsman may pass through their haunts every day of the year and the Ypecaha still be to him no more than a "wandering voice." But even persecution does not obliterate a certain inquisitive boldness which characterises them. Usually they roam singly in quest of food, but have reunions in the evening and occasionally during the day, especially in gloomy weather. On misty days they often wander to a distance from the covert, walking with an easy, somewhat stately grace, jerking the tail at every stride, and running with a velocity no man can equal. Where there are woods they usually fly when disturbed into a tree; and it is in connection with this habit that the Ypecaha sometimes makes a curious mistake in places where it has not been much shot at. One day, while pushing my way through a dense growth of rushes, I saw two Ypecahas not fifteen yards from me, on the horizontal branch of a tree, to which they had evidently flown for safety. I was anxious to secure them, but surprised at their temerity; and wishing to find out its cause, I approached them still nearer, and then stood for some time observing them. It was easy to see that they fancied themselves quite safe from me while off the ground. In the most unconcerned manner they continued strutting up and down along the branch, jerking their tails, and turning about this way and that, as if to tantalise their baffled enemy by ostentatiously displaying their graces.

When surprised on the open ground the Ypecaha lies close, like a Tinamu, refusing to rise until almost trodden upon. It springs up with a loud-sounding whirr, rushes violently through the air till, gaining the reeds, it glides a few yards and then drops ; its flight is thus precisely like that of the Tinamu, and is more sounding and violent than that of the Grouse or Partridge. On spying an intruder it immediately utters a powerful cry, in strength and intonation not unlike that of the Peacock. This note of alarm is answered by other birds at a distance as they hastily advance to the spot where the warning was sounded. The cry is repeated at irregular intervals, first on one side, then on the other, as the birds change their position to dog the intruder's steps and inspect him from the reeds. I have surprised parties of them in an open space, and shot one or more ; but no sooner had the survivors gained their refuge than they turned about to watch and follow me, sounding their powerful alarm the whole time. I have frequently been followed half a mile through the rushes by them, and by lying close and mimicking their cries have always succeeded in drawing them about me.

But the Ypecaha's loudest notes of alarm are weak compared with the cries he utters at other times, when, untroubled with a strange presence, he pours out his soul in screams and shrieks that amaze the listener with their unparalleled power. These screams in all their changes and modulations have a resemblance to the human voice, but to the human

voice exerted to its utmost pitch, and expressive of agony, frenzy, and despair. A long, piercing shriek, astonishing for its strength and vehemence, is succeeded by a lower note, as if in the first one the creature had wellnigh exhausted itself. The double scream is repeated several times ; then follow other sounds, resembling, as they rise and fall, half-suppressed cries of pain and moans of anguish. Suddenly the unearthly shrieks are renewed in all their power. This is kept up for some time, several birds screaming in concert ; it is renewed at intervals throughout the day, and again at set of sun, when the woods and marshes resound with the extravagant uproar. I have said that several birds unite in screaming ; this is invariably the case. I have enjoyed the rare pleasure of witnessing the birds at such times ; and the screams then seem a fit accompaniment to their disordered gestures and motions.

A dozen or twenty birds have their place of reunion on a small area of smooth, clean ground surrounded by rushes or sedges ; and by lying well concealed and exercising some patience, one is enabled to watch their proceedings. First one bird is heard to utter a loud metallic-sounding note, three times repeated, and somewhat like the call of the Guinea-fowl. It issues from the reeds or rushes, and is a note of invitation quickly responded to by other birds on every hand as they all hurriedly repair to the customary spot. In a few moments, and almost simultaneously, the birds appear, emerging from the reeds and running into the open space, where

they all immediately wheel about and begin the exhibition.

Whilst screaming they rush from side to side as if possessed with frenzy, the wings spread and agitated, the beak wide open and raised vertically. I never observed them fight or manifest anger towards each other during these performances ; and knowing the pugnacious spirit of the Ypecahas, and how ready they are to seek a quarrel with birds of other species, this at first surprised me, for I was then under the mistaken impression that these gatherings were in some way related to the sexual instinct.

Whilst watching them I also remarked another circumstance. When concealing myself amongst the rushes I have been compelled to place myself so disadvantageously, owing to the wet ground, that any single bird straying accidentally into the open space would have discovered my presence immediately ; yet the birds have entered and finished their performance without seeing me, so carried away are they by the emotion that possesses them during these moments. But no sooner has the wild chorus ended, than, aware of my presence, they have fled precipitately into the reeds.

We frequently speak of our familiarity with the habits of the species we have long and carefully observed in a state of nature ; yet the knowledge so gained must necessarily be exceedingly imperfect, for with many shy vigilant birds it is next to impossible to see them without being seen ; and no bird, conscious of being watched, will act unconstrainedly

any more than a human being with clouded reputation will comport himself naturally with the eyes of a detective on him. While we are observing the bird, the bird watches us : of all its curious doings when we are out of sight and mind we see nothing. The only way to learn the habits of a species like the Ypecaha—wary, intelligent, and passing its life behind a screen of rushes—is to domesticate it ; for although in this state some instincts are blunted and others remain in abeyance, they are not obliterated. It might surprise some that I speak of the Ypecaha as an intelligent bird, since it is a member of the "stupid family," as Professor Parker has called the Rails ; but in spite of the very profound admiration I feel for that illustrious anatomist, I believe he is wrong about these birds : there is, to my mind, very much more stupidity in the Anserine and Limicoline families, while the Ypecaha has always seemed to me a singularly intelligent bird.

Fortunately Azara was able to give an account of one of these birds in a domestic state, which shows that it makes a very sprightly and entertaining although a mischievous pet. It was taken young and allowed to run about at liberty with the poultry at the house of a village doctor in Paraguay. When full-grown it was very domineering, and became the tyrant of the poultry-yard. Occasionally a cock had the courage to face it, and then a singular combat would ensue : the Ypecaha, moving with astonishing rapidity, putting its head low, would charge, and, thrusting its head between the cock's legs, fling him

instantly on his back, then rain a shower of blows on his breast before he could rise. It was fond of eggs, and always knew when a hen went off to lay, cautiously following her to the nest and then concealing itself at some distance to wait. As soon as the egg was dropped it would run, pick it up with its beak, and carry it away to a safe distance, and then, breaking a hole in the shell at one end, suck out the contents without spilling a drop. Sometimes, when the hen remained too long on the nest, it would lose its temper, and, driving her off, pursue her with the greatest animosity about the grounds, administering correction with its sharp beak. Not satisfied with devouring all the eggs laid by the doctor's fowls, it visited all the neighbours' houses, doing so much damage that at length the poor doctor, afraid perhaps that his practice would suffer, had the troublesome bird put to death.

This Ypecaha would never allow any one to touch it, but it would come into the house and search through all the rooms for thimbles, scissors, and other small metal objects, and these it would carry away to conceal them among the weeds or else bury them in the mud. It was also a good mouser, and after killing a mouse with a blow from its beak would swallow it entire.

LITTLE WATERHEN

Porphyriops melanops

Above olivaceous; head darker; wings brown; wing-coverts tinged with chestnut; outer secondaries more or less distinctly margined with white; beneath cinereous; middle of belly and crissum white; flanks olivaceous, spotted with white; bill dark olive, with the tip yellowish; feet hazel; length 9, wing 5 inches. Female similar.

IN the southern part of the Argentine country the Little Waterhen is a summer visitant, and very abundant in the marshes along the Plata. In language and habits it is like the Coots: it is not often seen on land, and feeds principally as it swims about in a jerky manner among the floating reeds. It appears in October, migrating exclusively, I think, by night; and after the autumnal departure an individual is rarely seen. By day they are shy and retiring, but scatter abroad in the evening, frequently uttering their hollow mysterious cry, called "the witch laugh" by superstitious people, and resembling a sudden burst of hysterical laughter, the notes beginning loud and long, becoming brief and hurried as they die away.

YELLOW-BILLED COOT

Fulica leucoptera

Dark slatey; head and neck black; crissum white, with a black median patch; bend of wing and outer margin of external primary, also the tips of some of the secondaries, white; bill yellow; head-shield rounded behind; feet olivaceous; length 15, wing 7.5 inches. Female similar.

THIS is perhaps the most abundant species of *Fulica* in the Plata region, and certainly congregates in the

largest numbers. The colour of the beak and shield is of a very delicate yellow; the legs and feet dull green; the head, neck, and part of the back velvet-black; all the rest of the plumage dark slate-colour, except the under-coverts of the tail, which are white and render the bird very conspicuous when it is swimming away with the tail raised vertically.

On the pampas, in large marshy lagoons, this Coot is sometimes seen in immense numbers; thousands of birds uniting in one flock, and spreading over the low shores to feed, they look like a great concourse of Rooks. But they are exceedingly timid, and at the sight of a bird of prey or other enemy they all scuttle back to the water, tumbling over each other in their haste to reach it. They rise in a peculiar manner, rapidly striking the surface of the water with their great lobed feet, often for a distance of twenty or thirty yards before they are fully launched in the air. They are loquacious birds, and when swimming about concealed among the thick rushes are heard answering each other in a variety of curious tones, some of their loud, hollow-sounding, reiterated cries resembling peals of laughter.

The nest is a slovenly structure of rushes lying on the water, with a very slight depression for the eggs, which are ten or twelve in number. These are long, pointed at one end, dull cream-colour, marked over the whole surface with small blackish and purple spots.

There are two other species of Coots in Argentina: the Red-gartered Coot, *F. armillata*, the largest

species, which like the last has a yellow shield, but bordered with red and the bare portions of the tibiae crimson; hence the name: and the Red-fronted Coot, *F. leucopyga*, with beak and shield scarlet.

Altogether the Family Rallidæ counts thirteen species in Argentina: eight Rails and Crakes, two Waterhens, and three Coots.

ARGENTINE COURLAN

Aramus scolopaceus

Above brown; forehead, lores, and chin greyish white; neck striped with white; beneath similar; bill brown; legs greenish grey; length 24, wing 13 inches. Female similar.

THIS curious bird has a blackish-brown plumage, glossed with bronze on the upper parts; its total length is about two feet and a half, and the wings, when spread, measure nearly four feet from tip to tip. It has been called "an abnormal relative of the Rails at most," and in its peculiar flight and many of its habits certainly differs very widely from the Rails. It has but one known relative, the Giant Courlan of northern South America, a rare species about whose habits little is known.

The beak of this bird is nearly five inches long, straight, and of an iron hardness; the tip is slightly bent to one side, the lower mandible somewhat more than the upper. The tongue extends to the extremity

of the beak ; at the end it is of a horny toughness, and frayed or split into filaments. This beak is a most effective instrument in opening shells ; for where molluscs abound the Courlan subsists exclusively on them, so that the margins of the streams which this bird frequents are strewn with innumerable shells lying open and emptied of their contents.

Every shell has an angular piece, half an inch long, broken from the edge of one valve. Mussels and clams close their shells so tightly that it would perhaps be impossible for a bird to insert his beak, however knife-like in shape and hardness, between the valves in order to force them open ; therefore I believe the Courlan first feels the shell with his foot "hilst wading, then with quick dexterity strikes his beak into it before it closes, and so conveys it to the shore. Otherwise it would be most difficult for the bird to lift the closed shell from the water and to carry it to land ; but supposing it could do this, and afterwards succeed in drilling a hole through it with its beak, the hole thus made would have jagged edges and be irregular in shape. But the hole is, as I have said, angular and with a clean edge, showing that the bird had just thrust his beak half an inch or an inch between the valves, then forced them open, breaking the piece out during the process, and probably keeping the shell steady by pressing on it with its feet.

By day the Courlan is a dull bird, concealing itself in dense reed-beds in streams and marshes. When driven up he rises laboriously, the legs dangling

down, and mounts vertically to a considerable height. He flies high, the wings curved upward and violently flapped at irregular intervals; descending he drops suddenly to the earth, the wings motionless, pointing up, and the body swaying from side to side, so that the bird presents the appearance of a falling parachute. On smooth ground he walks faster than a man, striking out his feet in a stately manner and jerking the tail, and runs rapidly ten or twelve yards before rising. At the approach of night he becomes active, uttering long, clear, piercing cries many times repeated, and heard distinctly two miles away. These cries are most melancholy, and together with its mourning plumage and recluse habits have won for the Courlan some pretty vernacular names. He is called the "Lamenting Bird" and the "Crazy Widow," but is more familiarly known as the *Carau*.

Near sunset the Caraus leave the reed-beds and begin to ascend the streams to visit their favourite fishing-grounds. They are very active at night, retiring again at the approach of morning, and sometimes pass the day perched on trees, but more frequently concealed in dense rush-beds.

As the breeding-season draws near they become exceedingly clamorous, making the marshes resound day and night with their long, wailing cries. The nest is built among the rushes, and contains ten or twelve eggs big as a Turkey's eggs, and very large for the size of the bird, slightly elliptical, sparsely marked with blotches of pale brown and purple on a dull white



COMMON JACANA

Parra jacana (Linn.)



ground, the whole egg having a powdered or floury appearance. When the nest is approached the parent birds utter sharp, angry notes as they walk about at a distance. The young and old birds live in one flock until the following spring.

The Carau is more nocturnal than the true Rails, and, having a far more powerful flight, takes to wing more readily; in its gestures and motions on the ground it resembles them, but differs strikingly from all Ralline birds in the habit it possesses of flying when disturbed to some open place, where it walks about conspicuously, watching the intruder.

JACANA

Parra jacana

Head and neck purplish black; back and wings bright chestnut; primaries and secondaries pale greenish yellow tipped with brown; flanks dark chestnut; breast dark black; abdomen purplish; the tail chestnut tipped with black; wattles on head and base of bill red, rest of bill yellow; feet olive; length 10.5, wing 3.8 inches. Female similar.

THE beautiful Jacana—pronounced something like *Yasaná*—also called in the vernacular *Alas-amarillas* (Yellow-wings), differs very widely from all the other members of the Limicoline Order in which it is placed, in the enormously elongated toes which enable it to run about on the floating leaves of water plants. It is supposed to come nearest to the Plovers,

but is more like a Rail in its appearance, which is most singular.

The colouring of the plumage heightens the singularity of its appearance: the head, neck, and underparts being black; the shoulders, back, and wing-coverts chestnut; while the quills, which have a bright satiny lustre, are apple-green in colour, and in some lights appear golden-yellow.

In the southern part of the Plata district the Jacana is migratory, arriving from the north in Buenos Ayres early in October, either singly or in small parties. In their migration they appear to follow the course of the Plata; and though some individuals are found breeding inland, they are for the most part confined to the littoral marshes.

The Jacanas journey by very easy stages, frequently alighting to rest by the way; for they are so incapable of sustained flight that boys on the pampas occasionally take them, pursuing them on horseback till the birds drop down exhausted. I believe the migratory Rails travel in the same way—a matter not easily determined, as they migrate by night; but they are feeble-winged creatures, and when driven to rise flutter away as if wounded. I have observed the Jacanas migrating by day, but would not for this reason affirm that they do not journey by night, since the Bartram's Sandpiper and other species journey both day and night.

The Jacana flies swiftly, in a straight line and close to the surface; the wings flutter rapidly, and there are frequent intervals of gliding. When rising

it presents a most novel appearance, as the lovely golden-green of the wings is quite concealed when the bird is at rest; the beauty of its flight is thus greatly enhanced by the sudden display of a hue so rare and delicate. At a distance from the beholder, and in a strong sunshine, the wings appear of a shining golden yellow. Not only when flying does the Jacana make a display of its beautiful wings; without rising it has a way of exhibiting them, appearing to delight as much in them as the Cockatoo does in its crest or the Peacock in its train. When several of these birds live in company, occasionally they all in one moment leave their feeding, and with quick excited notes, and clustering together in a close group, go through a singular and pretty performance, all together holding their wings outstretched and agitated, some with a rapid fluttering, others with a slow-moving leisurely motion like that of a butterfly sunning itself. The performance over, the birds peaceably scatter again. I have never observed Jacanas fighting.

Shortly after arriving they pair, and build a simple nest with few materials, usually on the floating weeds. The eggs are four, in shape like a Snipe's eggs, spotted with chestnut on a pale yellowish-brown ground. During incubation the male keeps guard at some distance from the nest, and utters a warning cry at the approach of an intruder; the female instantly flies from the nest, but in rising renders herself very conspicuous. When the nest is approached the parent birds hover about, occasionally fluttering

as if wounded, all the time keeping up a clamour of hurried, angry notes somewhat resembling the yelping cries of the Stilt.

SPUR-WING LAPWING

Vanellus cayennensis

Above grey; broad front and vertical crest black; patch on the scapulars purplish bronze; upper tail-coverts white; primaries purplish black; greater coverts white; lesser wing-coverts bronze green; tail, basal half white, the other half purple-black tipped with white; beneath, chin, line down the middle of the throat and breast shining black; sides of neck grey, passing into white on the face; abdomen and under wing-coverts white; bill, spur on wing, and feet red; eyes crimson; length 13, wing 8.2 inches. Female similar.

THE Lapwing of La Plata is considerably larger than the well-known Lapwing of the Old World, but closely resembles that bird in the general colour of the plumage, in the long, slender, black crest, and in general appearance. Throughout the Argentine country it is called *Téru-téru*, from its ever-repeated disyllabic cry; west of the Andes the vernacular name is *Queltréguá*, also in imitation of its notes. It has red legs, crimson irides, a rosy beak tipped with black, and coral-red wing-spurs; and these spots of bright colour add to its bold, striking appearance. In size, beauty, and spirit it is a king among the Plovers, while its jealous, aggressive disposition gives it the character of a tyrant amongst birds in general. On the pastoral pampas (the district from which the

giant grasses have disappeared) it is (or was) excessively abundant ; and it is there resident, although, as with most strong-winged resident species, some individuals do certainly migrate, small parties being occasionally seen in spring and autumn flying steadily at a great height, apparently performing a long journey. As a rule the birds pair for life, and remain always on the spot where they breed. They may be persecuted with guns, their eggs taken year after year, even the ground turned up with the plough, but they still refuse to be driven out. In regions having a broken surface—hills, woods, and sheltered hollows—birds naturally get attached to one spot, for each locality possesses its own features, and individuals frequenting it acquire a knowledge of its advantages. The vast pampas have a uniform level surface, and produce the same kinds of food in the same quantities. They are parched with droughts and flooded by rains alternately, and swept by dust storms in summer and cold gales in winter—violent enough, one would imagine, to drive every winged creature away and obliterate all marks of home. Again, the powerful flight of this species would enable it to take long journeys, and if unaffected by atmospheric changes, scarcity of food and water might be a temptation to seek new regions. But through all vicissitudes the Téru-téru clings to its chosen spot of ground.

In defence of its territory it wages perpetual war against most living creatures, the objects of its special abhorrence being men, dogs, Rheas, and birds of

prey generally. Its noisy cry and irascible temper are spoken of by most travellers and naturalists ; for no person riding across the pampas could possibly overlook the bird, with its screaming protests against all trespassers perpetually ringing in his ears ; but they have all omitted to mention the singular habit which this bird has of associating in sets of three for the purpose of amusement or play. Each couple, as I have said, live always together on their own pretty well - defined plot of ground, which they jealously guard from intrusion. Yet if you watch a pair of them for a while you will presently see another bird—one of a neighbouring couple—rise up and fly to them, leaving his own mate to take care of home ; and instead of resenting this visit as an intrusion, they welcome it with notes and signs of manifest pleasure. Advancing to the visitor, they place themselves behind it, and then all three, keeping step, begin a rapid march, uttering loud drumming and rhythmical notes in time with their movements, the notes of the birds behind coming in a rapid stream, while the leading bird utters loud single notes at regular intervals. The march ceases, the leader stretches out his wings, still emitting loud notes, while the other two, with puffed-out plumage, standing exactly abreast, stoop forward until the tips of their beaks touch the ground, and, sinking their voices to a murmur, remain for some time in this singular posture. The performance is then over ; the birds all resume their natural attitudes, and the visitor takes his leave. It is quite certain that this

display has no connection with the sexual feeling, for it is indulged in all the year round, at all hours of the day, and also during moonlight nights. It is simply the bird's manner of expressing its joyous spirits ; for most living creatures—birds especially—have more or less well-defined methods of playing ; and play-day with the Térus is every day, and at brief intervals. And yet the grave, pompous air of the birds, and the military precision of their movements, might easily lead an observer to attribute these displays to some more important motive. Play is not only indulged in with neighbours ; there are many solitary Térus continually wandering about from place to place—probably young birds not yet settled in life—and when one of these vagrants passes near a pair he is immediately invited to join them, and when he alights all go through the performance together with great zest. In this case, however, as soon as it is over, the strange bird is attacked with great spirit and chased away ; and if by chance he comes down again near them, they hasten to drive him up with increased fury. He is wanted only for five or six minutes and must not outstay his welcome.

While watching their antics, which the gauchos call the Térus's quadrilles, a curious subject of enquiry suggested itself to my mind. It appeared to me that its manner of playing has had a reflex effect strong enough to mark the bird's whole character—language, bearing, and habits being coloured by it, and even the domestic relations interfered with. And with regard to the latter point, though it is the

rule that each cock bird has only one hen, I have known several instances of a cock with two hens, the two females laying their eggs in one nest and taking turns in sitting on them. I have also found instances of two males to one female; and in one case where I watched the birds I noticed that when the female was on the nest the males stood over her, one on each side.

I once had my attention drawn to a large concourse of Térus by the strange behaviour of two individuals amongst them, and I stayed to watch their proceedings. It was in the dry, hot weather, and a great many birds had congregated to drink at a lagoon. Some hundreds of them were standing about, quietly preening their feathers, and in the middle of the flock two birds were conspicuously marching about, stiff and upright as a couple of soldiers engaged in some military exercise, and uttering loud notes full of authority. Every few minutes a fresh bird would arrive and alight at some distance from the water, on which the two noisy birds would bustle up, and, ranging themselves behind it, run it with loud drumming notes to the margin; then, standing close together, they would wait till its thirst was quenched, after which they would run it away to some distance from the water, of which they seemed to have made themselves dispensers. For over an hour I continued watching them, and every bird that arrived was conducted to and from the water in this ceremonious manner.

Occasionally several couples unite and soar about

in a compact flock ; they divide into sets of three birds each, then hover for some time, all waving their wings exactly in time and screaming their notes in unison, and these movements seem like an imitation in the air of the usual marching and drumming performance on the ground.

The breeding-season of the Térus begins as early as the month of June in favourable seasons ; severe cold, drought, or other causes sometimes delay it to August. The nest is a shallow circular hollow made by the bird on the level plain, and lined with broken grass-stems and small fragments of thistle-stalks ; the eggs are four, rather sharply pointed at one end, and have an olive-green ground colour spotted with black. The eggs in different nests vary greatly in size, ground colour, and in the amount of black they are marked with, no two birds laying eggs exactly alike.

While the female is on the nest the male keeps watch at a distance of twenty or thirty yards, and utters a low warning cry in case of danger. The female leaves the nest sometimes by running, but oftener flies from it, and by marking the spot she rises from it is easy to find the nest on the open level pampas. In the course of a morning's ride I have picked up as many as sixty-four eggs. During incubation the birds are excessively watchful and jealous, their irritability increasing with the growth of the chick in the shell ; and at that time they will attack any bird of prey approaching the nest with great fury. When approached by a human

being they fly to meet him when he is still far from them, and hovering, with loud screams, over him, dash down at intervals, threatening to strike with their wing-spurs, coming very close to his head. Unable to intimidate the enemy with this show of violence the bird changes its tactics, and, alighting at some distance, counterfeits the action of a bird seeking its nest. With well-acted caution and secrecy in its manner, it runs silently along, stooping low, and having found a slight nest-like depression on the surface, sits on it, half opens its wings, and begins gathering all the small sticks or straws within its reach and carefully arranges them about it, as most ground-breeding birds do when incubating. Sometimes also, like many other species, it tries to lead one away from the nest by feigning lameness ; but the former instinct of seeking and sitting on an imaginary nest, which I have not observed in any other bird, seems far more complex and admirable.

When sheep in a flock pass over the nest, the bird stands on it to defend its eggs ; and then its loud cries and outspread wings often serve to bring the sheep, from motives of curiosity, about it. Even with a dozen sheep clustered round it the bird stands undaunted, beating their faces with its wings ; but, unhappily for it, if the shepherd is following, the loud cries of the bird bring him to the spot, and the eggs so bravely defended are taken.

AMERICAN GOLDEN PLOVER

Charadrius dominicus

Above brownish black, with numerous irregular spots of yellow ; forehead, superciliary stripe, and sides of neck white ; beneath black ; crissum whitish ; axillaries smoky grey ; bill black ; feet dark grey ; length 10.5, wing 7 inches. Female similar. Young, beneath dirty white, with greyish freckles.

THIS closely allied representative of the Golden Plover of Europe, from which it is distinguishable mainly by its rather larger size and smoky-grey axillaries, visits South America after its breeding season in the north.

The American Golden Plover is abundant and well known to every one by its native name *Chorlo* throughout Southern Argentina. Its wild, clear notes are first heard about the last week in August ; and among the first comers many individuals are seen still wearing the nuptial dress. After their long journey from the Arctic regions they are lean and not worth shooting ; two months later they become excessively fat, and are then much appreciated by gourmets. But although so regular in their arrival they do not regularly visit the same localities every season ; the bird may be abundant in a place one year and scarce or absent altogether the next. During the spring, from September to December, they prefer open plains with short grass and in the neighbourhood of wet or marshy ground ; at the end of December, when the giant thistle (*Carduus mariana*), which often covers large areas of country, has been

burnt up by the sun and blown to the ground, they scatter about a great deal in flocks of from one to four or five hundred. At noon, however, they all resort to a lagoon or marshy place containing water, congregating day after day in such numbers that they blacken the ground over an area of several acres in extent ; and at a distance of a quarter of a mile the din of their united voices resembles the roar of a cataract. As population increases on the pampas these stupendous gatherings are becoming more and more rare. Twenty-five years ago it was an exceptional thing for a man to possess a gun, or to use one when he had it ; and if Chorlos were wanted, a gaucho boy, with a string a yard long with a ball of lead attached to each end, could knock down as many as he liked. I have killed them in this way myself, also with the *bola perdida*—a ball at the end of a long string thrown at random into a cloud of birds.

The habits, flight, and language of the Golden Plover need not be spoken of here, as this bird has been so often and exhaustively described by North American ornithologists. The only peculiarity it possesses which I have not seen mentioned, is its faculty of producing a loud sound, as of a horn, when a few passing birds, catching sight of others of their kind on the ground below, descend violently and almost vertically to the earth with unmoving wings. This feat is, however, rarely witnessed ; and on the first occasion when I heard the sound high above me, and looked up to see half a dozen Chorlos rushing

down from the sky, the sight almost took my breath away with astonishment.

The Golden Plover appears to be most abundant on the pampas between the thirty-fourth and thirty-sixth parallels of latitude, but how far south its range extends has not yet been ascertained. The return migration begins early in March, and yet Mr. Barrows met with it in the neighbourhood of Bahia Blanca and on the Sierra de la Ventana from 8th February to 19th March. During most of this time, he says, it was abundant in flocks of from twenty to two hundred birds, which appeared to be moving uniformly south or south-west.

WINTER PLOVER

Eudromias modesta

Above brownish cinereous; frontal band and superciliary stripe white; wings and central tail-feathers blackish; lateral tail-feathers white, the inner ones with an imperfect black subterminal band; beneath, throat cinereous, breast bright chestnut with a black band below; belly white; bill black, base of lower mandible yellowish; feet brown; length 7.5, wing 5.3 inches. Female similar. Young without the rufous chest.

THIS species in its gait, flight, and general appearance closely resembles the American Golden Plover, but is smaller than that bird, and its sober upper plumage is unrelieved with flecks of golden colour. It breeds in South Patagonia and the Falklands, and migrates north in autumn, appearing on the pampas in April, and being met with there throughout the winter;

hence the vernacular name *Chorlito de invierno* (Little Winter Plover). In its winter dress the upper plumage is greyish drab colour; the breast dark brown; the belly white. It is shy and active in disposition, has a very rapid flight, and is seen in flocks varying greatly in number, from a dozen to two or three hundred individuals. When feeding the birds scatter very widely, running swiftly over the ground in all directions. When on the wing it frequently utters its cry, which has not the mellow tone of the Golden Plover's note, but it is wonderfully clear and far-reaching, and impresses the listener with its wildness and melancholy.

Their return migration takes place in August.

PATAGONIAN RINGED PLOVER

Aegialitis falklandicus

Above brown; front white; band across forehead and sides of head black, bordered with rufous; wings black, with bright shafts and white edges to the base of some of the inner primaries; central tail-feathers black, lateral white, with a more or less distinct subterminal blackish band, except on the outer pair; beneath white, crossed by two broad blackish bands on the breast; bill and feet black; length 7, wing 5 inches. Female similar.

THE pretty little Belted Plover inhabits the Falklands and South Patagonia, and migrates north in winter as far as Paraguay; but it is not anywhere common, and is seldom seen in parties exceeding half a dozen in number. It is extremely active, always preferring wet grounds to dry, and runs rapidly over the mud

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SLENDER-BILLED PLOVER
Oreophilus ruficollis (Wagl.)



SLENDER-BILLED PLOVER 189

in search of food like a *Tringa*. Its only language is a low clicking note uttered when taking wing.

Some individuals remain to breed as far north as the pampas of Buenos Ayres. Mr. Gibson says the nest is always placed near the water, and is a slight scrape in the ground lined with dry grass. The eggs are three in number, have black spots on an olive ground, and in shape resemble Lapwings' eggs.

Durnford also found it breeding in the Chupat Valley in September 1877.

There is a second species of Ringed Plover (Azara's Ringed Plover, *Æ. collaris*) which ranges over the whole of South America and was occasionally seen by me on migration, on the pampas.

SLENDER-BILLED PLOVER

Oreophilus ruficollis

Above grey, variegated with yellowish brown and striped with black on the back and wing-coverts; front and superciliaries yellowish brown; stripe through the eye blackish; wings blackish with white shafts, their under surface white; tail grey, with a black subterminal bar on the lateral feathers; beneath grey; throat rusty reddish; below the breast a black band or patch; bill dark, feet red; length 10, wing 6.5 inches.

THIS pretty and singular Plover, with a bill like a Sandpiper, inhabits South Patagonia and the Falklands. In the autumn it migrates north, and during the cold season is found sparsely distributed throughout the Argentine States, and passes into Bolivia and Peru. On the pampas it is most abundant in April,

but most of the birds seen during that month are travellers to warmer latitudes.

It is a shy and exceedingly active bird, somewhat larger than the Golden Plover in size, and in the Plata district is usually called *Chorlo canela*, from the prevailing cinnamon-red of the plumage. It is distinguished in the family it belongs to by the great length of its straight, slender, probe-like bill, unlike that of any other Plover; and it also has other structural peculiarities, the toes being exceptionally short and thick, the frontal bone curiously modified, and the eyes enormously large, like those of a nocturnal species. I do not think, however, that it migrates by night, as I have never heard its peculiar passage-cry after dark. A flock is usually composed of from a dozen to thirty individuals, and when on the ground they scatter widely, running more rapidly than any other Plover I am acquainted with. When they travel the flight is swift and high, the birds much scattered. They possess no mellow or ringing notes like other members of the Plover family; on the ground they are silent, but when taking wing invariably utter a long, tremulous, reedy note, with a falling inflection, and usually repeated three or four times. The sound may be imitated by striking on the slackened stings of a guitar. This cry is frequently uttered while the birds are migrating.

On the Rio Negro in Patagonia I observed this Plover only in the winter season; but Durnford found it nesting in the valley of the Sengel in Chupat in the month of December.

SEED-SNIPE

Thinocorus rumicivorus

Above buffy brown, marbled and irregularly banded with black ; wing-feathers black, edged with white, external secondaries like the back ; tail black, broadly tipped with white, central rectrices like the back ; beneath white ; a broad line on each side of the throat uniting in the centre of the neck and expanding into a collar on the breast, black ; sides of neck greyish ; bill dark brown, feet yellow ; length 6.5, wing 3.9 inches. Female similar but with only slight traces of black bar.

THIS curious bird has the grey upper plumage and narrow, long, sharply-pointed wings of a Snipe, with the plump body and short, strong, curved beak of a Partridge. But the gallinaceous beak is not in this species correlated, as in the Partridges, with stout rassorial feet ; on the contrary, the legs and feet are extremely small and feeble, and scarcely able to sustain the weight of the body. When alighting the Seed-Snipe bows its body directly upon the ground and sits like a Goatsucker ; when rising it rushes suddenly away with the wild, hurried flight and sharp, scraping alarm-cry of a Snipe. It is exclusively a vegetable feeder. I have opened the gizzards of many scores to satisfy myself that they never eat insects, and have found nothing in them but seed (usually clover-seed) and tender buds and leaves mixed with minute particles of gravel.

These birds inhabit Patagonia, migrating north to the pampas in winter, where they arrive in April.

They usually go in flocks of about forty or fifty individuals, and fly rapidly, keeping very close together. On the ground, however, they are always much scattered, and are so reluctant to rise that they will allow a person to walk or ride through the flock without taking wing, each bird creeping into a little hollow in the surface or behind a tuft of grass to escape observation. During its winter sojourn on the pampas the flock always selects as a feeding-ground a patch of whitish argillaceous earth with a scanty, withered vegetation; and here, when the birds crouch motionless on the ground, to which their grey plumage so closely assimilates in colour, it is most difficult to detect them. If a person stands still, close to or in the midst of the flock, the birds will presently betray their presence by answering each other with a variety of strange notes, resembling the cooing of Pigeons, loud taps on a hollow ground, and other mysterious sounds, which seem to come from beneath the earth.

In the valley of Rio Negro I met with a few of these birds in summer, but could not find their nests.

Durnford, however, who found them breeding in Chupat at the end of October, tells us that the nest is a slight depression in the ground, sometimes lined with a few blades of grass. "The eggs have a pale stone ground-colour, very thickly but finely speckled with light and dark chocolate markings; they have a polished appearance, and measure 1.3 by .8 inch." (*Ibis*, 1878, p. 403.)

BRAZILIAN STILT

Himantopus brasiliensis

White; line behind each eye, nape, back of neck, interscapulum, and wings black; a narrow white band divides the black neck from the black upper back; bill black, feet orange; length 14, wing 8.5 inches. Female similar.

THIS bird is resident and common in the Plata district, and is called in the vernacular *Téru-real*, also *Zancudo* (Stilt). It frequents marshes and lagoons, and wades in search of food in the shallow water near the margin. It is lively in its movements, and notwithstanding the great length of its legs has a pretty, graceful appearance on the ground. On the wing, however, it is seen at its best, the flight being remarkably swift and free, while the sharply-pointed glossy-black wings contrast finely with the snow-white plumage of the body, and the red legs stretched out straight behind have the appearance of a long, slender tail. Stilts are fond of aerial exercises, pursuing each other with marvellous velocity through the air, so that a few moments after the spectator has almost lost sight of them in the sky above they are down again within a few yards of the surface. While pursuing each other they constantly utter their excited yelping cries, which in tone remind one of the musical barking of some hounds.

The nest is made on the low ground close to the water, and consists merely of a slight lining of dry grass and leaves gathered in a small depression on

the surface ; the eggs are four in number, pyriform, dark olive colour spotted with brownish black, the spots being very thickly crowded at the large end. During incubation the male keeps guard and utters a warning note on the appearance of an enemy, whereupon the female quits the nest. They also counterfeit lameness to draw a person from the neighbourhood of the eggs or young, but in a manner peculiar to this species ; for owing to the great length of their legs they cannot drag themselves along the ground, as Ducks, Plover, Partridges, and other birds do. Placing themselves at a distance of forty or fifty yards from the intruder, but with breast towards him, they flutter about a foot above the ground, their long legs dangling under them, and appear as if struggling to rise and repeatedly falling back. If approached they slowly retire, still fluttering just above the grass and without making any sound. After the young birds are able to fly they remain with the parents until the following spring ; and sometimes two or three families associate together, raising the number of the flock to fifteen or twenty birds. The young have a sharp, querulous cry of two notes ; the plumage is brown and pale grey ; the eyes black. After nine or ten months the adult plumage is acquired, not by moulting, but by a gradual change in the colours of the feathers. By the same gradual process the eye changes from black to crimson, the outer edge of the iris first assuming a dull reddish colour, which brightens and widens until the whole iris becomes of a vivid red.

PARAGUAY SNIPE

Gallinago paraguiae

Above brown, striped and barred with black and pale fulvous; wings dark cinereous edged with white; tail of sixteen rectrices, of which the outer pair are pin-shaped; beneath white, breast marbled with blackish and brown; length 10.5, wing 9.1 inches.

THIS familiar bird, called *Agachona* in the vernacular, from its habit of crouching close to the ground to escape observation when approached, is abundant in the Plata district and resident, although its sudden and total disappearance from all the open wet places where it is common in the winter gives one the impression that it is migratory. The bird, however, only retires to breed in the extensive lonely marshes. The nest is a slight depression on the moist ground close to the water, and lined with a little withered grass. The eggs are four, pear-shaped, and spotted with black on an olive-coloured ground.

After the summer heats are over Snipes suddenly appear again all over the country, and at this season they are frequently met with on the high and dry grounds among the withered grass and thistles. In favourable wet seasons they sometimes collect in large flocks, numbering not less than five or six hundred birds, and a flock of this kind will occasionally remain in one spot for several months without breaking up. They usually frequent an open spot of level ground where the water just covers the roots of the short grass; here the birds keep close together

while feeding and are visible from a long distance ; but they become extremely wary, all raising their heads in a very un-Snipe-like manner at the slightest alarm, and taking flight with the readiness of Wild Ducks. These flocks are, however, not often met with. Usually the Snipe is a solitary bird, crouches close when approached, and springs up suddenly when almost trodden on, loudly uttering its sharp scraping alarm-cry ; after rising to a considerable height, flying in a wild erratic manner, it returns suddenly to the earth, often dropping into the grass within twenty yards of the spot it rose from.

It is indeed curious to see how these habits, characteristic of the Snipes all over the world, are so completely laid aside when the birds associate in large flocks.

Early and late in the day many individuals are usually on the wing engaged in their aerial pastimes, the singular grinding or scythe-whetting sounds caused by their feathers in their violent descent from a great height being distinctly audible at a distance of nearly a mile. It is heard throughout the winter at all hours of the day in mild, damp weather, and on moonlight nights often until after midnight.

ARGENTINE PAINTED SNIPE 197

ARGENTINE PAINTED SNIPE

Rhynchus semicollaris

Above dark brown; head black, with a central and two lateral longitudinal bands of buffy white; wings ashy blackish, spotted with buffy white and barred with black; coverts with large oval spots of clear white; beneath, throat and breast dark brownish, with a conspicuous white neck-collar on each side; belly white, flanks tinged with buffy; bill greenish, reddish at tip; feet flesh-colour; length 8, wing 4.5 inches. Female similar, but slightly larger and more brightly coloured.

In the Argentine provinces this bird is called *Dormilón* (Sleepy-head), in allusion to its dull habits, which are like those of a nocturnal species. It passes the daylight hours concealed in dense reed-beds, rising only when almost trodden on; the flight is feeble and erratic, the rapid wing-flutterings alternating with intervals of gliding, and after going a short distance the bird drops again like a Rail into the rushes. From its behaviour on the ground, also in flying, when it appears dazed with the light, I have no doubt that it is altogether nocturnal or crepuscular in its habits. It is solitary and resident, and may be met with in small numbers in every marsh or stream in the Plata district, where its favourite reed-beds afford it cover. It appears to have no cry or note of any kind, for even when frightened from its nest and when the eggs are on the point of hatching it utters no sound. The eggs never exceed two in number, and are placed on the wet ground, often without any lining, among the close grass and herbage

near the water. They are oblong and bluntly pointed at the smaller end, and have a white ground colour, but so densely marked and blotched with black that in some cases they appear to be almost wholly of that colour, or like black eggs flecked with white.

PECTORAL SANDPIPER

Tringa maculata

Above brown, varied with black; superciliaries whitish; rump and middle upper tail-coverts white; beneath white; neck and breast greyish streaked with blackish; length 8.5, wing 5.1 inches. Female similar.

THE Pectoral Sandpiper is a well-known North-American species that visits the south during migration. It breeds abundantly in Alaska, and descends in winter through Central and South America to Chili and Patagonia. Durnford found it abundant about the salt-lagoons of Chupat. Near the end of August it begins to arrive in La Plata, usually in very small flocks or singly; and among these first comers there are some young birds so immature, with threads of yellow down still adhering to the feathers of the head and altogether weak in appearance, that one can scarcely credit the fact that so soon after being hatched they have actually performed the stupendous journey from the northern extremity of the North American continent to the Buenos-Ayrean pampas.

This species differs from other Sandpipers in

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Being much more solitary and sedentary in its ways, feeding for hours in one spot, and in its Snipe-like habit of sitting close when approached and remaining motionless watching the intruder ; also in its language, its low, soft, tremulous cry when flying being utterly unlike the sharp and clicking sounds emitted by other species. During the hot months, when water begins to fail, they occasionally congregate in flocks, sometimes as many as two or three hundred individuals being seen together ; but at all times it is more usual to see them in small parties of half a dozen or singly.

Two other well-known Arctic-American species of *Tringa* are annual visitants to Argentina :—Baird's Sandpiper, *T. bairdi*, and Bonaparte's Sandpiper, *T. fuscicollis*.

GREATER YELLOWSHANKS

Totanus melanoleucus

Above brownish grey spotted with white ; rump nearly white ; beneath white ; throat and neck with black streaks ; bill black, feet yellow ; length 14, wing 7.5 inches. Female similar.

THE Greater Yellowshanks is best known as an Arctic-American species, descending south during migration, and arriving in La Plata at the end of September or early in October, singly or in pairs, and sometimes in small flocks. Without ever being abundant the bird is quite common, and one can

seldom approach a pool or marsh on the pampas without seeing one or more individuals wading near the margin, and hearing their powerful alarm-cry—a long, clear note repeated three times.

These summer visitors leave us in March, and then, oddly enough, others arrive, presumably from the south to winter on the pampas, and remain from April to August. Thus, notwithstanding that the Yellowshanks does not breed on the pampas, we have it with us all the year round. Durnford's observations agree with mine, for he says that the bird is found throughout the year near Buenos Ayres; and Mr. Barrows writes that this species "occurs every month in the year (at Concepcion in Entrerios), but in increased numbers during August, September, October, and November."

The Lesser Yellowshanks, *Totanus flavipes*, is also a common species, a visitor from Arctic America, in Argentina from September to April. Many non-breeding individuals are also found during the other months of the year. In habits, language, colour, and—except in size—in its entire appearance it closely resembles the Greater Yellowshanks; and the two species, attracted or deceived by this likeness, are constantly seen associating together.

SOLITARY SANDPIPER

Rhynocophilus solitarius

Middle toe nearly as long as tarsus. Above dark olivaceous grey, with blacker markings and slightly speckled with white; upper tail-coverts blackish, barred with white; tail white with blackish bars; beneath white; sides of neck and breast streaked and barred with dusky grey; under wing-coverts blackish, barred with white; length 8.5, wing 5 inches. Female similar.

THE well-known and well-named Solitary Sandpiper arrives later than the other birds of its family in La Plata, and differs greatly from them in its habits, avoiding the wet plains and muddy margins of lagoons and marshes where they mostly congregate, and making its home at the side of a small pool well sheltered by its banks, or by trees and herbage, and with a clear margin on which it can run freely. As long as there is any water in its chosen pool, though it may be only a small puddle at the bottom of a ditch, the bird will remain by it in solitary contentment. When approached it runs rapidly along the margin, pausing at intervals to bob its head, in which habit it resembles the *Totanus* or Yellowshanks, and emitting sharp little clicks of alarm. Finally, taking flight, it utters its peculiar and delightful cry, a long note thrice repeated, of so clear and penetrating a character that it seems almost too fine and bright a sound even for so wild and aerial a creature as a bird.

The flight is exceedingly rapid and wild, the bird rising high and darting this way and that, uttering

its piercing trisyllabic cry the whole time, and finally, dashing downwards, it suddenly drops again on to the very spot from which it rose.

I was once pleased and much amused to discover in a small sequestered pool in a wood, well sheltered from sight by trees and aquatic plants, a Solitary Sandpiper living in company with a Blue Bittern. The Bittern patiently watched for small fishes, and when not fishing dozed on a low branch overhanging the water; while its companion ran briskly along the margin snatching up minute insects from the water. When disturbed they rose together, the Bittern with its harsh, grating scream, the Sandpiper daintily piping its fine bright notes—a wonderful contrast! Every time I visited the pool afterwards I found these two hermits, one so sedate in manner, the other so lively, living peacefully together.

BARTRAM'S SANDPIPER

Actitura bartramius

Above blackish, feathers edged with yellowish brown; rump black; wing-coverts yellowish brown, barred with black; primaries blackish; beneath white; breast and flanks ochraceous, spotted and barred with black; under surface of wings barred with white and black; bill yellowish, tip black; feet yellow; length 10, wing 6.3 inches. Female similar.

BARTRAM'S SANDPIPER, a Sandpiper with the habits of a Plover, is a widely-distributed North American species, its breeding area extending over a large portion of the United States, where it is known as

the Upland Plover. The people of that country have been paying it a good deal of attention of late ; they have discovered that it is a charming bird, and at the same time that during the last three or four decades their gunners have almost extirpated it. They fear that it is going the way of the Passenger Pigeon, the Pinnated Grouse, the Carolina Parakeet, the Ivory-billed Woodpecker, and, I believe we must now add, the Esquimo Whimbrel.

This species differs from its fellow-migrants of the same family from the north to Argentina in its wide and even distribution over all that portion of the pampas where the native coarse grasses which once covered the country have disappeared, an area comprising not less than 50,000 square miles. It begins to arrive as early as September, coming singly or in small parties of three or four ; and, extraordinary as the fact may seem when we consider the long distance the bird travels, and the monotonous nature of the level country it uses as a " feeding area," it is probable that every bird returns to the same spot year after year ; for in no other way could such a distribution be maintained, and the birds appear every summer evenly sprinkled over so immense a surface.

On the pampas the bird is called *Chorlo solo*, on account of its solitary habit, but more commonly *Batitú*, an abbreviation of the Indian name *Mbatuitui*. In disposition it is shy, and prefers concealment to flight when approached, running rapidly away through the long grass or thistles, or

concealing itself behind a tussock until the danger is past, or often, where the herbage is short, crouching on the ground like a Snipe. It runs swiftly and pauses frequently ; and while standing still with head raised it jerks its long tail up and down in a slow measured manner. When driven up it springs aloft with a sudden wild flight, uttering its loud mellow-toned cry, composed of three notes, strongly accented on the first and last ; and sometimes, when the bird is much alarmed, the first note is rapidly reiterated and becomes a bubbling sound like that of the European Cuckoo, but much more musical. After flying a very short distance it drops to the ground again, agitating its wings in a tremulous manner as it comes down. And sometimes after alighting it continues standing motionless for several seconds with the wings stretched up vertically. These wing motions and other pretty gestures give it a very attractive appearance. In its skulking habits, and reluctance to fly, it is more like a Rail than a Snipe. It also, Rail-like, frequently alights on trees and fences, a habit I have not remarked in any other Limicoline species.

It inhabits the pampas from September until March ; but early in February the great return migration begins, and then for two months the mellow cry of the Batitú is heard far up in the sky, at all hours, day and night, as the birds wing their way north. In some seasons stragglers are found throughout the month of April, but before the winter arrives not one is left.

BUFF-BREASTED SANDPIPER

Tryngites rufescens

Above dark brownish black, each feather widely edged with buff; wings blackish, narrowly tipped with white, the inner half of the inner web whitish reticulated with black; tail blackish, the outer rectrices lighter, each with subterminal black crescent and white terminal edge; beneath buff, darker on the throat and breast, and edged with whitish, lighter on flanks and belly; under primary-coverts barred and reticulated with black, like the inner web of the primaries, and forming a marked contrast with the rest of the under surface of the wing, which is pure white; length 7.7, wing 5.3 inches. Female similar.

THIS species is also an annual visitor to the pampas from the Arctic regions where it breeds. It begins to arrive, usually in small bodies, early in the month of October; and during the summer is seldom met with in flocks of any size on the pampas, but is usually seen on the dry, open ground associating in small numbers with the Golden Plover, the Whimbrel, and other northern species. I however think it probable that it travels farther south than its fellow-migrants from North America, and has its principal feeding-grounds somewhere in the interior of Patagonia; also that its northern journey takes place later than that of other species. In some seasons I have observed these birds in April and May, in flocks of two to five hundred, travelling north, flock succeeding flock at intervals of about fifteen minutes, and continuing to pass for several days.

HUDSONIAN GODWIT

Limosa haemastica

In summer: Above dark brownish black, mixed on the head with longitudinal streaks of whitish, on the neck with pale chestnut, and with many of the feathers of the back spotted or edged with pale chestnut; wings and tail blackish, the upper half of the inner webs of the primaries and secondaries, the basal part of the outer rectrices, and a broad band across the upper tail-coverts pure white; beneath, cheeks and throat whitish, becoming pale chestnut on the neck, longitudinally striped with blackish; rest of under surface deeper chestnut, transversely barred with blackish. *In winter*: Above uniform dull brownish; head, neck, and under surface dirty white or pale buff; length 14.3, wing 8.5 inches.

THE Hudsonian Godwit, Mr. Seeböhm tells us, "breeds on the tundras of North America north of the forest-growth, from Alaska to Baffin's Bay, but is rare at the western extremity of its range." In winter it goes far south, like most of the other *Grallæ*.

Durnford found it "common from April to September about the lagoons and arroyos to the south of Buenos Ayres"; and states that in habits it much resembles the Bar-tailed Godwit of Europe (*Limosa lapponica*). He also met with it in Chupat, and obtained two specimens there on the 13th of November, 1876.

I have met with it in flocks during the summer of the Southern Hemisphere, and these birds, as well as those obtained by Durnford, were undoubtedly visitors from the north; but invariably small flocks of half a dozen to thirty birds begin to appear on the pampas in April, and remain there, as Durnford says, until September, when the northern migrants are nearly due. These individuals must therefore

breed near the extremity, or beyond the extremity, of South America. It is very curious, to say the least of it, that the Arctic and Antarctic regions of America should possess the same species, and that, at opposite seasons of the year, it should winter in the same district, so far from the breeding-place of one set of individuals, and so near to that of the other! Captain Abbott observed the Hudsonian Godwit in the Falkland Islands in flocks in the month of May (see *Ibis*, 1861, p. 156). These could not have been Alaska birds, but were no doubt southern breeders on their way north, for that they could winter so far south seems incredible.

ESQUIMO WHIMBREL

Numenius borealis

Above dark brown, each feather edged or spotted with pale buff or dirty white, becoming most strongly marked on the rump and upper tail-coverts; wings uniform dusky brownish, narrowly edged with white; tail buffy brown, transversely barred with dusky; beneath, throat white; rest of under surface pale buff, with more or less V-shaped dusky markings on the breast, flanks, and under tail-coverts; axillaries and under wing-coverts pale chestnut, transversely barred with dusky; length 11.6, tail 8.14 inches. Female similar.

THE Esquimo Whimbrel, which, as Mr. Seeböhm tells us, may be distinguished from all its congeners by having scarcely any traces of bars on its primaries and by the back of the tarsus being covered with hexagonal reticulations, migrates from the tundras of North America, where it breeds, to the southern extremity of South America.

Mr. Barrows noted its first arrival at Concepcion in Entrerios on 9th September, 1880, "in large flocks." After the middle of October not one was seen.

The same excellent observer saw it almost daily on the pampas between Azul and Bahia Blanca, "in company with the Golden Plover and Bartram's Sandpiper, until late in February."

From the 8th to the 10th of October, 1877, Durnford saw large flocks of this Whimbrel in the Chupat valley flying south, and obtained two specimens. Capt. Packe and Capt. Abbott both procured examples in the Falkland Islands.

The Esquimo Whimbrel was common enough in its season on the pampas in my day, appearing in September to October in small flocks of thirty or forty to a hundred or more, and often associating with the Golden Plover; but, as I now hear from the authorities of the Smithsonian Institution at Washington, it is practically extinct.

BLACK-TAILED SKIMMER

Rhynchops melanura

Above brownish black; forehead and wing-band white; tail black; beneath white; bill, apical half black, basal half orange; feet red; length 19, wing 15 inches. Female similar.

THE Black-tailed Skimmer, which is common on the coasts of Brazil, migrates south in spring, following the course of the Plata river in its journey, and

appearing in pairs or small flocks in the neighbourhood of Buenos Ayres during the month of October. Its chief breeding-ground is on the extensive mud-banks and islets at Bahia Blanca on the Atlantic coast. The return migration occurs in March.

Darwin met with the Scissor-bill during his excursion up the Paraná in October, 1833, and speaks of it as follows (*Nat. Journ.*, p. 161) :

" I here saw a very extraordinary bird, called the Scissor-beak (*Rhynchos nigra*). It has short legs, web feet, extremely long-pointed wings, and is of about the size of a Tern. The beak is flattened laterally, that is in a plane at right angles to that of a Spoonbill or Duck. It is as flat and elastic as an ivory paper-cutter, and the lower mandible, different from every other bird, is an inch and a half longer than the upper. I will here detail all I know of the habits of the Scissor-beak. It is found both on the east and west coasts, between latitudes 30 and 45, and frequents either salt or fresh water. The specimen now at the Zoological Society was shot at a lake near Maldonado, from which the water had been nearly drained, and which in consequence swarmed with small fry. I there saw several of these birds, generally in small flocks, flying backwards and forwards, close to the surface of the lake. They kept their bills wide open, and with the lower mandible half buried in the water. Thus skimming the surface, they ploughed it in their course ; the water was quite smooth, and it formed a most curious spectacle to behold a flock, each bird leaving its

narrow wake on the mirror-like surface. In their flight they frequently twist about with extreme rapidity, and so dexterously manage, that with their projecting lower mandible they plough up small fish, which are secured by the upper half of their scissor-like bill. This fact I repeatedly saw as, like Swallows, they continued to fly backwards and forwards close before me. Occasionally, when leaving the surface of the water, their flight was wild, irregular, and rapid; they then also uttered loud, harsh cries. When these birds are fishing, the length of the primary feathers of the wings is seen to be quite necessary, in order to keep the latter dry. When thus employed, their forms resemble the symbol by which many artists represent marine birds. The tail is much used in steering their irregular course.

"These birds are common far inland along the course of the Rio Paraná; it is said they remain during the whole year and breed in the marshes. During the day they rest in flocks on the grassy plains, at some distance from the water. Being at anchor, as I have said, in one of the deep creeks between the islands of the Paraná, as the evening drew to a close one of these Scissor-beaks suddenly appeared. The water was quite still, and many little fish were rising. The bird continued for a long time to skim the surface, flying in its wild and irregular manner up and down the narrow canal, now dark with the growing night and the shadows of the overhanging trees. At Monte Video I observed that some large flocks during the day remained on

the mud-banks at the head of the harbour, in the same manner as on the grassy plains near the Paraná ; and every evening they took flight direct to seaward. From these facts I suspect that the *Rhynchos* generally fishes by night, at which time many of the lower animals come most abundantly to the surface. M. Lesson states that he has seen these birds open the shells of the *Mactræ*, buried in the sand-banks on the coast of Chili ; from their weak bills, with the lower mandible so much produced, their short legs and long wings, it is very improbable that this can be a general habit."

DOMINICAN GULL

Larus dominicanus

Mantle brownish-black ; primaries black, with white tips, and a subapical patch in old birds ; rest of plumage white ; bill yellow, orange at angle of lower mandible ; legs and feet olive ; length 22, wing 18 inches.

THE Dominican Gull, which belongs to the same section of the group as the well-known Black-backed Gulls of Europe and closely resembles our Great Black-backed Gull, is common through the Plata district in winter, from April to August. During the summer months it confines itself to the Atlantic coast, and breeds in large numbers in the neighbourhood of Bahia Blanca, on the extensive sand-banks and mud-flats there ; and in other suitable localities further south. Durnford found it nesting at Tombo Point, sixty miles south of the Chupat river.

At the approach of cold weather the Dominican Gulls leave the sea-shore and wander inland and northward. At this season they are almost exclusively flesh-eaters, with a preference for fresh meat; and when the hide has been stripped from a dead cow or horse they begin to appear, vulture-like, announcing their approach with their usual long, hoarse sea-cries, and occasionally, as they circle about in the air, joining their voices in a laughter-like chorus of rapidly repeated notes. Their winter movements are very irregular; in some seasons they are rare, and in others so abundant that they crowd out the Hooded Gulls and Carrion-Hawks from the carcase; I have seen as many as five to six hundred Dominicans massed round a dead cow.

ARGENTINE BLACK-HEADED GULL

Larus maculipennis

Head and nape brownish-black (in breeding dress); tail and underparts white; mantle pale grey; primaries black or dark grey, tipped with white, and with large elongated white patches on the outer portions of first to fifth, followed by a subapical black bar (in I_5 " includes the lower portion is white); underwing pale grey; bill, " " and feet blood-red; length 17, wing 11.5 inches.

THIS common Black-headed Gull is found throughout the Argentine country, down to Chupat in Patagonia, and is exceedingly abundant on the pampas of Buenos Ayres, where it is simply called *Gaviota* (Gull). In the month of October they congregate in their breeding-places—extensive inland marshes,

partially overgrown with rushes. The nests are formed of weeds and rushes, placed just above the water and near together, several hundreds being sometimes found within an area of less than one quarter of an acre. The eggs are four in number, large for the bird, obtusely pointed, of a pale clay-colour, thickly spotted at the big end and sparsely on the other parts with black.

Every morning at break of day the Gulls rise up from their nests and hover in a cloud over the marsh, producing so great a noise with their mingled cries that it can be heard distinctly at a distance of two miles. The eggs are considered a great delicacy, resembling those of the Plover in taste and appearance, and are consequently much sought after, so that when the locality near which a gallery is situated becomes inhabited the birds have no chance of rearing their young, as the boys in the neighbourhood ride into the marsh every morning to gather the eggs. The Gulls are, however, very tenacious of their old breeding-places, and continue even after years of persecution to resort to them.

The young birds are of a pale grey colour, mottled with dull brown, and have a whining, querulous cry. The plumage becomes lighter, through the autumn and winter, but it is not until the ensuing summer, when the dark brown nuptial hood is assumed, that the young birds acquire the perfect plumage—soft grey-blue above, and the white bosom with its lovely pink blush.

As soon as the young are able to fly the breeding-

place is forsaken, the whole concourse leaving in a body, or scattering in all directions over the surrounding country; and until the following summer their movements depend entirely on food and water. If the weather is dry the Gulls disappear altogether; and if grasshoppers become abundant the country people wish for rain to bring the Gulls. When it rains then the birds quickly appear, literally from the clouds, and often in such numbers as to free the earth from the plague of devastating insects. It is a fine and welcome sight to see a white cloud of birds settle on the afflicted district; and at such times their mode of proceeding is so regular that the flock well deserves the appellation of an army. They sweep down with a swift, graceful flight and settle on the earth with loud, joyful cries, but do not abandon the order of attack when the work of devouring has begun. The flock often presents a front of over a thousand feet, with a depth of sixty or seventy feet; all along this line of battle the excited cries of the birds produce a loud, continuous noise; all the birds are incessantly on the move, some skimming along the surface with expanded wings, others pursuing the fugitives through the air, while all the time the hindmost birds are flying over the flock to alight in the front ranks, so that the whole body is steadily advancing, devouring the grasshoppers as it proceeds. When they first arrive they seem ravenously hungry, and after gorging themselves they fly to the water, where after drinking they cast up their food and then go back to renew the battle.

In spring these Gulls come about the farms to follow the plough, filling the new-made furrows from end to end, hovering in a cloud over the ploughman's head and following at his heels, a screaming, fighting multitude. Wilson's expression in describing a northern species, that its cry "is like the excessive laugh of a negro," is also descriptive of the language of our bird. Its peculiar cry is lengthened at will and inflected a hundred ways, and interspersed with numerous short notes like excited exclamations. After feeding they always fly to the nearest water to drink and bathe their feathers, after which they retire to some open spot in the neighbourhood where there is a carpet of short grass. They invariably sit close together with their bills toward the wind, and the observer will watch the flock in vain to see one bird out of this beautiful order. They do not stand up to fly, but rise directly from a sitting posture. Usually the wings are flapped twice or thrice before the body is raised from the ground.

In some seasons in August and September, after a period of warm, wet weather, the larvæ of the large horned beetle rise to the surface, throwing up little mounds of earth as moles do; often they are so numerous as to give the plains, where the grass has been very closely cropped, the appearance of being covered with mud. These insects afford a rich harvest to the Spur-winged Lapwing (*Vanellus cayanensis*), which in such seasons of plenty are to be seen all day diligently running about, probing and dislodging them from beneath the fresh hillocks. The

Gulls, unprovided with a probing beak, avail themselves of their superior cunning and violence to rob the Lapwings ; and I have often watched their proceedings for hours with the greatest interest. Hundreds of Lapwings are perhaps visible running busily about on all sides ; near each one a Gull is quietly stationed, watching the movements of its intended dupe with the closest attention. The instant a great snow-white grub is extracted the Gull makes a rush to seize it, the Lapwing flies, and a violent chase ensues. After a hundred vain doublings the Plover drops the prize, and slopes toward the earth with a disappointed cry ; the pursuer checks his flight, hovers a moment watching the grub fall, then drops down upon it, gobbles it up, and hastens after the Lapwing to resume his watch.

Many of these Gulls haunt the estancias to feed on the garbage usually found in abundance about cattle-breeding establishments. When a cow is slaughtered they collect in large numbers and quarrel with the domestic poultry over the offal. They are also faithful attendants at the shepherd's hut ; and if a dead lamb remains in the fold when the flock goes to pasture they regale on it in company with the Chimango. The great *saladeros*, or slaughter-grounds, which were formerly close to Buenos Ayres, were also frequented by hosts of these neat and beautiful scavengers. Here numbers were seen hovering overhead, mingling their excited screams with the bellowing of half-wild cattle and the shouts of the slaughterers at their rough work ; and at intervals,

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wherever a little space is allowed them, dropping down to the ground, which reeked with blood and offal, greedily snatching up whatever morsels they could seize on, yet getting no stain or speck on their delicate dress of lily-white and ethereal blue.

On the open pampas their curiosity and anger seem greatly excited at the appearance of a person on foot ; no sooner has the Gull spied him than it sweeps toward him with a rapid flight, uttering loud, indignant screams that never fail to attract all of its fellows within hearing distance. These all pass and repass, hovering over the pedestrian's head, screaming all the time as if highly incensed, and finally retire, joining their voices in a kind of chorus and waving their wings upwards in a slow, curious manner ; but often enough, when they are almost out of sight, they suddenly wheel about and hurry back screaming, with fresh zeal, to go through the whole pretty but annoying performance again.

GREAT GREBE

Aechmophorus major

Above blackish ; occipital crest divided, bronzy black ; wide bar across the wing white ; beneath white ; chin dark ashy ; neck, breast, and sides of belly (in adult) more or less red ; bill yellowish, feet dark ; length 21, wing 8 inches.

THIS Grebe is called in the vernacular *Macas cornudo*—the first word being the Indian generic name for the Grebes, while *cornudo* signifies horned, from the bird's habit of erecting, when excited, the

feathers of the nape in the form of a horn. The species is found throughout Eastern Argentina, from its northern limits to Central Patagonia, where Durnford found it common and resident. On the Rio Negro I found it abundant, and it was formerly just as common along the Plaza river, but owing to its large size and the great beauty of its lustrous under-plumage it is very much sought after and is becoming rare.

It is impossible to make this Grebe leave the water, and when discovered in a small pool it may be pursued until exhausted and caught with the hand ; yet it must occasionally perform long journeys on the wing when passing from one isolated lake to another. Probably its journeys are performed by night.

There is little diversity in the habits of Grebes, and only once have I seen one of these birds acting in a manner which seemed very unusual. This Grebe was swimming about and disported itself in a deep, narrow pool, and showed no alarm at my presence, though I sat on the margin within twenty-five yards of it. I saw it dive and come up with a small fish about three inches long in its beak ; after sitting motionless for a little while, it tossed the fish away to a considerable distance with a sudden jerk of its beak, and then at the instant the fish touched the water it dived again. Presently it emerged with the same fish, but only to fling it away and dive as before ; and in this way it released and recaptured it about fifteen times, and then, tired of play, dropped it and let it escape.

Mr. Gibson has the following note on the breeding habits of the Great Grebe, as observed at Ajó, near the mouth of Rio de La Plata : " *P. major* breeds about the end of August, placing its nest in the thickest rushes of the swamp. The nest, built of wet water-weeds, is raised just above the level of the water ; and I have twice seen the sitting bird hastily draw some weeds over the eggs before leaving them, on my approach. The clutch consists of three ; and these are of the usual Grebe colour, generally much soiled and stained."

There are four more species of Grebe in Argentina : the Bright-cheeked Grebe, *Podiceps californicus*, confined to southern S. America ; Rolland's Grebe, *Podiceps rollandi*, also confined to the south of the continent ; the American Dabchick, *Tachybaptes dominicus*, inhabiting Central and S. America ; and the Thick-billed Grebe, *Podilymbus podiceps*, found in both North and South America.

TATAUPA TINAMU

Crypturus tataupa

Above chestnut brown ; head and neck dark cinereous ; beneath cinereous ; throat white ; middle of belly white ; flanks and crissum varied with undulating bars of black and white ; bill yellowish, feet dark ashy ; length 10, wing 5.2 inches. Female similar.

THE Tataupa Tinamu was first described by Azara as an inhabitant of Paraguay, whence it extends into the northern provinces of the Argentine Republic.

White obtained specimens among the undergrowth in the dense forests of Campo Colorado, near Oran, and Durnford also met with it near Salta.

To Azara's interesting account of the Tataupa's habits nothing has been recently added. He says that this species inhabits woods and thickets, and also approaches houses where it finds cover—hence the Guarani name, which means a domestic bird, or of the house. It lays four eggs of a fine purple colour; and when driven from the nest flutters along the ground, feigning lameness. It sings all the year round, and for power and brilliance of voice is pre-eminent among this class of birds. After the first note of its curious song there is an interval of eight seconds of silence; then the note is repeated with shorter and shorter intervals, until, becoming hurried, it runs into a trill, followed by a sound which may be written *chororó*, repeated three or four times. When sitting close it tips forward, pressing its breast on its legs, so that the rump is raised higher than the back, and opening the terminal feathers of the body, it spreads them in a semi-circle over the back as if to conceal itself beneath them, and when looked at from behind nothing is visible except this fan of feathers. The feathers are concave with points inclining upward, and when thus disposed have a singular and beautiful appearance.

RUFOUS TINAMU

Rhynchotus rufescens

Above cinereous ; head, wings, and back crossed by black bars with pale ochraceous edgings ; neck reddish ; primaries chestnut ; beneath pale cinereous, strongly tinged with rufous on the neck and breast ; chin white ; bill ashy, beneath at base yellowish ; feet dark flesh-colour ; length 14, wing 9.5 inches. Female similar, but larger.

THIS large Tinamu, known to the Argentines as the *Perdiz grande*, or Great Partridge, is found on the pampas wherever long grasses abound, and extends as far south as the Colorado river, its place being taken in Patagonia by *Calodromas elegans*. It is never met with in woods or thickets, and requires no shelter but the giant grasses, through which it pushes like a Rail. Wherever the country becomes settled and the coarse indigenous grasses are replaced by those of Europe, it quickly disappears, so that it is already extinct over a great portion of the Buenos-Ayrean pampas.

This species is solitary in its habits, conceals itself very closely in the grass, and flies with the greatest reluctance. I doubt if there is anywhere a bird with such a sounding flight as the Tinamu ; the whirr of its wings can only be compared to the rattling of a vehicle driven at great speed over a stony road. From the moment it rises until it alights again there is no cessation in the rapid vibration of the wings ; but, like a ball thrown by hand, the bird flies straight

away with extraordinary violence until the impelling force is spent, when it slopes gradually towards the earth, the distance it is able to accomplish at a flight being from 800 to 1500 yards. This flight it can repeat when driven up again as many as three times, after which the bird can rise no more.

The call of the Great Partridge is heard, in fine weather, at all seasons of the year, especially near sunset, and is uttered while the bird sits concealed in the grass, many individuals answering each other; for although I call it a solitary bird, many birds are usually found living near each other. The song or call is composed of five or six notes of various length, with a mellow flute-like sound, and so expressive that it is, perhaps, the sweetest bird-music heard on the pampas.

The eggs are usually five in number, nearly round, highly polished, and of a dark reddish-purple or wine colour; but this beautiful tint in a short time changes to a dull leaden hue. The nest is a mere scrape, insufficiently lined with a few grass-leaves. The young birds appear to leave the mother (or father, for it is probable that the male hatches the eggs) at a very early period. When still very small they are found living, like the adults, a solitary life, with their faculties, including those of flight and the musical voice, in a high state of perfection.

SPOTTED TINAMU

Nothura maculosa

Above pale yellowish brown, barred with black and brown and streaked with fulvous white; wing-feathers ashy black, crossed on both webs by fulvous bands; beneath rich yellowish brown; throat white; breast and flanks spotted and banded with brownish black; bill and feet yellowish brown; length 11, wing 5.5 inches. Female similar, but larger.

THE *Perdiz común* or Common Partridge of the pampas, as it is always called—the naturalist's name of Tinamu being utterly unknown in the southern part of South America—is much smaller than the *Perdiz grande*, but in its form, slender curved beak, bare legs, and in the yellowish mottled plumage, generally resembles it. It also inhabits the same kind of open grassy country, and is abundant everywhere on the pampas and as far south as the valley of the Rio Negro in Patagonia. It is solitary; but a number of individuals are usually found in proximity; and in lonely places on the pampas, where they are excessively abundant, I have seen three or four meet together and play in the manner of kittens, darting out from a place of concealment at each other, the pursued bird always escaping by turning off at right angles or by suddenly crouching down and allowing the pursuer to spring over it.

It is very tame in disposition, and flies so reluctantly that it is not necessary to shoot them where they are very abundant, as any number can be killed with a long whip or stick. It moves on the

ground in a leisurely manner, uttering as it walks or runs a succession of low whistling notes. It has two distinct songs or calls, pleasing to the ear and heard all the year round ; but with greater frequency in spring, and where the birds are scarce and much persecuted, in spring only. One is a succession of twenty or thirty short impressive whistling notes of great compass, followed by half a dozen rapidly uttered notes, beginning loud and sinking lower till they cease ; the other call is a soft continuous trill, which appears to swell mysteriously on the air, for the listener cannot tell whence it proceeds ; it lasts several seconds, and then seems to die away in the distance.

It is an exceedingly rare thing to see this bird rise except when compelled. I believe the power of flight is used chiefly, if not exclusively, as a means of escape from danger. The bird rises up when almost trodden upon, rushing through the air with a surprising noise and violence. It continues to rise at a decreasing angle for fifty or sixty yards, then gradually nears the earth, till, when it has got to a distance of two or three hundred yards, the violent action of the wing ceases and the bird glides along close to the earth for some distance, and either drops down or renews its flight. I suppose many birds fly in much the same way ; only this Tinamu starts forward with such amazing energy that until this is expended and the moment of gliding comes, the flight is just as ungovernable to the bird as the motion of a brakeless engine, rushing along

at full speed, would be to the driver. The bird knows the danger to which this peculiar character of its flight exposes it so well that it is careful to fly only to that side where it sees a clear course. It is sometimes, however, compelled to take wing suddenly, without considering the obstacles in its path ; it also often miscalculates the height of an obstacle, so that for Tinamus to meet with accidents when flying is very common. In the course of a short ride of two miles, during which several birds sprang up before me, I have seen three of these Tinamus dash themselves to death against a fence close to the path, the height of which they had evidently misjudged. I have also seen a bird fly blindly against the wall of a house, killing itself instantly. A brother of mine told me of a very curious thing he once witnessed. He was galloping over the pampas, with a very violent wind blowing in his face, when a Tinamu started up before his horse. The bird flew up into the air vertically, and, beating its wings violently, and with a swiftness far exceeding that of its ordinary flight, continued to ascend until it reached a vast height, then came down again, whirling round and round, striking the earth a very few yards from the spot where it rose, and crushing itself to a pulp with the tremendous force of the fall. It is very easy to guess the cause of such an accident : while the Tinamu struggled blindly to go forward, the violent wind, catching the under surface of the wings, forced it upwards, until the poor bird, becoming hopelessly confused, fell back to earth. I have often seen a

Swallow, Gull, or Hawk, soaring about in a high wind, suddenly turn the under surface of its wings to the wind and instantly shoot straight up, apparently without an effort, to a vast height, then recover itself, and start off in a fresh direction. The Tinamu, when once launched on the atmosphere, is at the mercy of chance ; nevertheless had this incident been related to me by a stranger I should not have recorded it.

This Tinamu is frequently run down and caught by well-mounted gaucho boys ; the bird frequently escapes into a kennel in the earth, but when it sees no refuge before it and is hotly pursued, it sometimes drops dead. When caught in the hand they " feign death," or swoon, but on being released quickly recover their faculties.

The nest is a slight hollow scratched in the ground under a thistle or in the grass, and lined with a few dry leaves. The number of eggs laid varies from five to eight. These are elliptical, with polished shells, and as a rule are of a wine-purple colour ; but the hue varies somewhat, some eggs having a reddish tinge and others a deep liver-colour.

In Patagonia the Spotted Tinamu is replaced by the very closely allied Darwin's Tinamu, *Nothura darwini*.

This species, called *Perdiz chico*, or Little Partridge, by the natives, is somewhat smaller and paler in colouring than the common Tinamu of the pampas, but very closely resembles the young of that species. It inhabits Patagonia, and is nowhere very numerous, but appears to be thinly and equally distributed on

the dry, sterile plains of that region, preferring places abounding in thin scrub. In disposition it is extremely shy, and when approached springs up at a distance ahead and runs away with the greatest speed and apparently much terrified. Sometimes when thus running it utters short whistled notes like the allied species. It rises more readily and with less noise than the pampas bird, and has a much higher flight. It has one call-note, heard only in the love-season—a succession of short whistling notes, like those of the *N. maculosa*, but without the rapidly uttered conclusion.

The nest is made under a small scrubby bush, and contains from five to seven eggs, in form and colour like those of *N. maculosa*, except that the reddish-purple tint is paler.

MARTINETA

Calodroma elegans

Above densely banded and spotted with black and pale fulvous; head cinereous, with black striations; a long recurved vertical crest of black feathers, partly edged with cinereous; two lateral stripes of the head above and beneath the eye and throat cinnamon white; beneath pale cinnamon, breast with numerous black cross-bars and black shaft-spots; belly, flanks, and under tail-coverts with broad black cross bands; wings ashy black, with numerous cross bands of pale cinnamon; bill blackish, feet bluish-grey; length 14.5, wing 8.3 inches. Female similar.

THIS fine game-bird in its size and mottled plumage resembles the *Rhynchos totus rufescens* of the pampas, which it represents in the Patagonian region south

of the Rio Colorado. It differs externally in the more earthy hue of its plumage, which is protective and harmonises admirably with the colour of its sterile surroundings ; also in having a shorter beak, and in being adorned with a long, slender, black crest, which the bird when excited carries directed forwards like a horn. There is, however, an anatomical difference which seems to show that the two species are not very near relations. The structure of the intestinal canal in the Martineta is most peculiar, and unlike that of any other bird I have ever dissected : the canal divides near the stomach into a pair of great ducts which widen towards the middle and extend almost the entire length of the abdominal cavity, and are set with rows of large membranous claw-shaped protuberances.

The Martineta inhabits the elevated table-lands, and is found chiefly where patches of scattered dwarf scrub occur among the thorny thickets. Apparently they do not require water, as they are met with in the driest situations where water never collects. They are extremely fond of dusting themselves, and form circular nest-like hollows in the ground for that purpose ; these hollows are deep and neatly made, and are visited every day by the same birds throughout the year. They live in coveys of from half a dozen to twenty or thirty birds, and when disturbed do not as a rule take to flight at once, but jump up one after another and run away with amazing swiftness, uttering as they run shrill, squealing cries, as if in the greatest terror. Their flight, although



MARTINETÀ TINAMU

Gallinula chloropus (d'Orb. et Vieill.)



violent, is not so sounding as that of the Rufous Tinamu, and differs remarkably in another respect. Every twenty or thirty yards the wings cease beating and remain motionless for a second, when the bird renews the effort ; thus the flight is a series of rushes rather than a continuous rush like that of the other species. It is also accompanied with a soft wailing note, which appears to die away and swell again as the flapping of the wings is renewed.

The call-note of the Martineta is never heard in winter ; but in the month of September they begin to utter in the evening a long, plaintive, slightly modulated whistle, the birds sitting concealed and answering each other from bush to bush. As the season advances the coveys break up, and their call is then heard on every side, and often all day long, from dawn until after dark. The call varies greatly in different birds, from a single whistle to a performance of five or six notes, resembling that of the great Partridge, but inferior in compass and sweetness. They begin to breed in October, making the nest at the roots of a small isolated bush. The eggs vary in number from twelve to sixteen ; they are elliptical in form, of a beautiful deep green in colour, and have highly polished shells.

It is probable, I think, that this species possesses some curious procreant habits, and that more than one female lays in each nest ; but owing to the excessive wariness of the bird in a state of nature it is next to impossible to find out anything about it. No doubt the day will come when naturalists will

find the advantage of domesticating the birds the life histories of which they wish to learn: may it come before all the most interesting species on the globe are extinct!

COMMON RHEA

Rhea americana

Above, head blackish; neck whitish, becoming black at the base of the neck and between the shoulders; rest slatey grey; beneath, throat and upper neck whitish, becoming black at the base of the neck, whence arise two black lateral crescents, one on either side of the upper breast; rest of under surface whitish; front of tarsus throughout covered with broad transverse scutes; length about 52 inches.

THE Common Rhea (called *Nandú* in the Guarani language, *Chueké* by the pampas Indians, and Ostrich by Europeans) is found throughout the Argentine Republic down to the Rio Negro in Patagonia, and, in decreasing numbers, to a considerable distance south of that river. Until within very recent times it was very abundant on the pampas, and I can remember the time when it was common within forty miles of Buenos Ayres city. But it is now becoming rare, and those who wish to have a hand in its extermination must go to a distance of three or four hundred miles from the Argentine capital before they can get a sight of it.

The Rhea is peculiarly well adapted, in its size, colour, faculties, and habits, to the conditions of the level woodless country it inhabits; its lofty stature, which exceeded that of any of its enemies

before the appearance of the European mounted hunter, enables it to see far ; its dim grey plumage, the colour of the haze, made it almost invisible to the eye at a distance, the long neck being so slender and the bulky body so nearly on a level with the tall grasses ; while its speed exceeded that of all other animals inhabiting the same country. When watching the chase of Ostriches in the desert pampas, abounding in giant grasses, it struck me forcibly that this manner of hunting the bird on horseback had brought to light a weakness in the Rhea—a point in which the correspondence between the animal and its environment is not perfect. The Rhea runs smoothly on the surface, and where the tall grass-tussocks are bound together, as is often the case, with slender twining plants, its legs occasionally get entangled, and the bird falls prostrate, and before it can struggle up again the hunter is close at hand and able to throw the *bolas*—the thong and balls, which, striking the bird with great force, wind about its neck, wings, and legs, and prevent its escape. When I questioned Ostrich hunters as to this point they said that it was true that the Rhea often falls when running hotly pursued through long grass, and that the deer (*Cervus campestris*) never falls because it leaps over the large tussocks and all such obstructions. This small infirmity of the Rhea would not, however, have told very much against it if some moderation had been observed in hunting it, or if the Argentine Government had thought fit to protect it ; but in La Plata, as in North America and South Africa, the

licence to kill, which every one possesses, has been exercised with such zeal and fury that in a very few more years the noblest Avian type of the great bird-continent will be as unknown on the earth as the *Mou* and the *Aepyornis*.

The Rhea lives in bands of from three or four to twenty or thirty individuals. Where they are not persecuted they show no fear of man, and come about the houses, and are as familiar and tame as domestic animals. Sometimes they become too familiar. At one estancia I remember an old cock bird that constantly came alone to feed near the gate, which had so great an animosity against the human figure in petticoats that the women of the house could not go out on foot or horseback without a man to defend them from its attacks. When the young are taken from the parent bird they become, as Azara truly says, "domestic from the first day," and will follow their owner about like a dog. It is this natural tameness, together with the majesty and quaint grace of its antique form, which makes the destruction of the Rhea so painful to think of.

When persecuted, Rheas soon acquire a wary habit, and escape by running almost before the enemy has caught a sight of them; or else crouch down to conceal themselves in the long grass; and it then becomes difficult to find them, as they lie close, and will not rise until almost trodden on. Their speed and endurance are so great that, with a fair start, it is almost impossible for the hunter to overtake them, however well mounted. When the bird

is running, the wings hang down as if injured, but usually one wing is raised and held up like a great sail, for what reason it is impossible to say. When hard pressed, the Rhea doubles frequently and rapidly at right angles to its course ; and if the pursuer's horse is not well trained to follow the bird in all its sudden turns without losing ground he is quickly left far behind.

In the month of July the love-season begins, and it is then that the curious ventriloquial bellowing, booming, and wind-like sounds are emitted by the male. The young males in the flock are attacked and driven off by the old cock-bird ; and when there are two old males they fight for the hens. Their battles are conducted in a rather curious manner, the combatants twisting their long necks together like a couple of serpents, and then viciously biting at each other's heads with their beaks ; meanwhile they turn round and round in a circle, pounding the earth with their feet, so that where the soil is wet or soft they make a circular trench where they tread. The females of a flock all lay together in a natural depression in the ground, with nothing to shelter it from sight, each hen laying a dozen or more eggs. It is common to find thirty to sixty eggs in a nest, but sometimes a larger number, and I have heard of a nest being found containing one hundred and twenty eggs. If the females are many the cock usually becomes broody before they finish laying, and he then drives them with great fury away and begins to incubate. The hens then drop their eggs

about on the plains ; and from the large number of wasted eggs found it seems probable that more are dropped out of than in the nest. The egg when fresh is of a fine golden yellow, but this colour grows paler from day to day, and finally fades to a parchment-white.

After hatching the young are assiduously tended and watched over by the cock, and it is then dangerous to approach the Rhea on horseback, as the bird with neck stretched out horizontally and out-spread wings charges suddenly, making so huge and grotesque a figure that the tamest horse becomes ungovernable with terror.

Eagles and the large Carrion Hawk are the enemies the Rhea most fears when the young are still small, and at the sight of one flying overhead he crouches down and utters a loud snorting cry, whereupon the scattered young birds run in the greatest terror to shelter themselves under his wings.

Darwin's Rhea, *Rhea darwini*, differs little in colouring from the Common Rhea, which it replaces south of the Rio Negro. From this river it ranges south to the Straits of Magellan. The Indians call it "Moltú Chueké"—short or dwarf Chueké ; its Spanish name is "Avestruz petizo." They were formerly very abundant along the Rio Negro ; unhappily some years ago their feathers commanded a very high price ; Gauchos and Indians found that hunting the Ostrich was their most lucrative employment ; consequently these noble birds were slaughtered in such numbers that they have been

almost exterminated wherever the nature of the country admits of their being chased. When on the Rio Negro I was so anxious to obtain specimens of this Rhea that I engaged several Indians by the offer of a liberal reward to hunt for me, but they failed to capture a single adult bird. I can only set down here the most interesting facts I was able to collect concerning its habits, which are very imperfectly known.

When pursued it frequently attempts to elude the sight by suddenly squatting down amongst the bushes, which have a grey foliage to which the colour of its plumage closely assimilates. When hard pressed it possesses the same habit as the Common Rhea of raising the wings alternately and holding them up vertically : and also doubles suddenly like that species. Its speed is greater than that of the Common Rhea, but it is sooner exhausted. In running it carries its head stretched forward almost horizontally, which makes it seem lower in stature than the allied species—hence the vernacular name of "Short Ostrich." It is found in flocks of from three or four to thirty or more individuals. It begins to lay at the end of July, that is, a month before the *Rhea americana*. Several females lay in one nest, which is merely a slight depression lined with a little dry rubbish ; as many as fifty eggs are sometimes found in one nest. A great many wasted or *huacho* eggs, as they are called, are also found at a distance from the nest. I examined a number of eggs brought in by the hunters, and found them vary greatly in shape, size,

and colour. The average size of the eggs was the same as those of the Common Rhea ; in shape they were more or less elliptical, scarcely any two being precisely alike. The shell has a fine polish, and when newly laid the colour is deep, rich green. They soon fade, however, and the side exposed to the sun first assumes a dull mottled green ; then this colour fades to yellowish, and again to pale stone-blue, becoming at last almost white. The comparative age of each egg in the nest may be known by the colour of the shell. The male incubates and rears the young ; and the procreant habits seem altogether like those of *Rhea americana*.

The young are hatched with the legs feathered to the toes ; these leg-feathers are not shed, but are gradually worn off, as the bird grows old, by continual friction against the stiff, scrubby vegetation. In adults usually a few scattered feathers remain, often worn down to mere stumps ; but the hunters told me that old birds are sometimes taken with the legs entirely feathered, and that these birds frequent plains where there is very little scrub. The plumage of the young is dusky grey, without white and black feathers. When a year old they acquire by moulting the mottled plumage of the adults, but do not attain their full size until the third year.

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